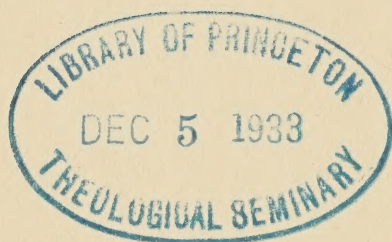


PSYCHOLOGY OF THE  
JUNIOR HIGH SCHOOL PUPIL  
EUGENSTEN AND MCGILLICOR



Division LB 1135

Section P 36





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IN EDUCATION**

**EDITED BY ELLWOOD P. CUBBERLEY**

**PROFESSOR OF EDUCATION  
LELAND STANFORD JUNIOR UNIVERSITY**



# PSYCHOLOGY OF THE JUNIOR HIGH SCHOOL PUPIL

BY

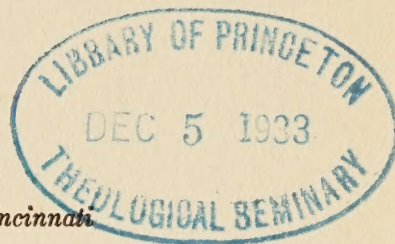
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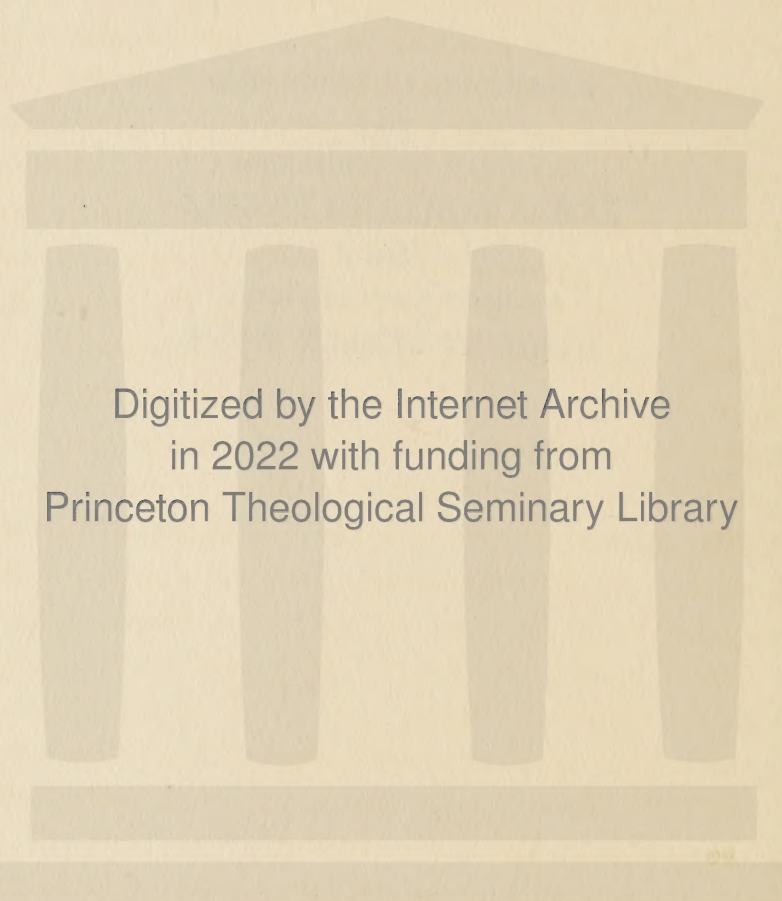
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**RESPECTFULLY DEDICATED**  
**TO**  
**A GREAT PSYCHOLOGIST**  
**JAMES ROWLAND ANGELL**  
**AND**  
**A GREAT EDUCATIONIST**  
**HERBERT SEELEY WEET**



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## EDITOR'S INTRODUCTION

BEGINNING in large part as an administrative solution of a crowded building situation, but in part also as an attempt to provide departmental teaching in the upper grades under more advantageous conditions than could be provided in the grammar school, the junior high school has since passed through a number of stages in its evolution. In 1909 and 1910 it was frankly adopted, in Berkeley and Los Angeles, because of its superior educational advantages. After a period of hesitation and experimentation, the junior high school has by now been accepted by both educators and the public as a desirable modification of the older 8-4 form of educational organization. The next step, and an important one, is to secure general recognition for it as an institution especially adapted to meet the peculiar needs of the early adolescent. As an organized institution the junior high school should now be expected to readjust its organization and work to meet better the developmental needs — physical, mental, social, and moral — of widely varying types of boys and girls in their early adolescent years. This change has been fully effected in some places, is well under way in others, and should be made generally.

Such a change calls for special organizations and adaptations, and for types of instruction which the older upper-grade organization and the first year of the high school do not provide. It should be recognized that the junior high school represents the creation of a new intermediate type of

educational institution, devised to meet the special biological and psychological needs of young people in their teens, and that the school stands, in its organization and purpose, midway between the class-teacher type of instruction characteristic of the pre-adolescent grade school, and the individual study type of instruction characteristic of the full adolescent high school. In particular, the junior high school organization of to-day should adapt its instruction to the peculiar psychological needs of the early adolescent through intelligent sorting and class placement, flexible and differentiated group study, failure prevention, the establishment of moral values and the right type of habit-reactions, proper individual and group contacts between the sexes, citizenship training, socialized activities, and vocational guidance.

An understanding of the place and peculiar work of the junior high school, then, as it has developed with us as a result of study and experimentation, calls for more than a study of its administrative adaptability as a part of an organized school system. Its work and practices and purposes, when properly conceived, being so thoroughly grounded on biological and psychological foundations, a clear understanding of its organization and work and possibilities calls for an understanding of the biological and psychological foundations upon which the modern conception of the school is based.

This much-needed understanding the authors of the present volume have given us in simple and scientific form. Taking up first the different phases of growth, response, mental development, and personality of the pupil of junior high school age, they have presented the fundamental ele-

ments needed for an understanding of early adolescent physical and mental and social development. With these as a basis, they have then applied the principles laid down to the organization and conduct of a junior high school, as it finds expression in the work of instruction, the work of socialization, and the work of educational, moral, social, and physical guidance.

The volume should prove to be profitable reading for teachers in the many junior high schools of the United States, for supervisory officers of school systems, and also for teachers and principals in our senior high schools, for much the same principles apply to the first year of senior high school instruction as to the junior high school work. The book should also form a very useful text in early adolescent psychology, and in the work and place of the junior high school, for use in teacher-training institutions everywhere.

ELLWOOD P. CUBBERLEY



## PREFACE

THIS book is written for one purpose — to present the student of secondary education with the coördinated viewpoint of education. This dualism means that the best educational practice in a given field is placed side by side with the science underlying that practice.

No argument is needed regarding the timeliness or necessity for attempting to present the real scientific facts regarding adolescent life and its educational handling. If the authors of this volume have any deep-seated views regarding the problem set for themselves they are as follows:

- (a) A science of education and, hence, a real profession of teaching, should rest primarily upon the scientific facts of pure psychology;
- (b) The application of psychological facts has been carried so far in the best adolescent (junior high) schools as to warrant a new contribution based on applied psychology;
- (c) In the coördination of practice with its underlying science are found educational values of immediate worth to the earnest teacher and student of education.

The book is an outgrowth of the experiences incident to the establishment of and experimentation carried on in the Washington Junior High School of Rochester, New York; conducting a training course for prospective junior high school teachers for several years at the University of Rochester; and, finally, the crystallizing of the coördinated ideal of teacher training through the development of the College of Education of the University of Cincinnati.

The writers have had in mind the use of the book as a text for college and normal school classes in the psychology of adolescence and certain junior high school training courses. Hence questions for discussion follow the several chapters, and an extensive bibliography is provided. It is hoped, however, that principals and teachers in the upper grades and secondary schools will find values in the general reading of the book.

L. A. P.

## ACKNOWLEDGMENTS

GRATITUDE is gratefully expressed to President James Rowland Angell who, while associated with the Department of Psychology of the University of Chicago, laid the foundation for the basic psychological viewpoints of the writers. Professor Harvey A. Carr and Professor John B. Watson have, in their respective developments of the Chicago tradition, contributed both directly and indirectly to much that follows.

The authors of this volume have been long associated with the public schools of Rochester, New York, the first while a professor of psychology and education in the University of Rochester, and the second as vice-principal of one of the first really noteworthy adolescent schools — the Washington Junior High School. These years have brought rich contacts with Superintendent Herbert Seeley Weet, former Principal James M. Glass, and many teachers and directors working experimentally in the establishment of the first junior high school of that city.

Professor Harlan C. Hines, member of the College of Education faculty, University of Cincinnati, has assisted materially by reading the manuscript and making many helpful suggestions.

Finally, the published works, both research and systematic, of many modern psychologists and school men have been freely employed, the writers striving to give due acknowledgment in each case. Especially, many investigations made by Professor Pechstein's graduate students, notably Messrs. Reynolds, Hendrickson, Fuson, Bird, Hawley, Taylor, and West, and Misses Stebbins and Martin, are included.



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# PSYCHOLOGY OF THE JUNIOR HIGH SCHOOL PUPIL

## GENERAL INTRODUCTION

PSYCHOLOGY claims for itself a place among the exact sciences, and seeks to meet the demands laid upon all bodies of subject-matter making up the so-called special sciences.

It has been long agreed that the typical sciences, such as physics, chemistry, biology, astronomy, and the rest, satisfy three definite criteria. First, each science has its own particular field, and, for purposes of specialization and convenience, can set up boundaries of at least practical significance. Second, the science reduces its occurrences or phenomena to the controlled conditions of the experimental laboratory. Third, the data of the science — its laws, facts, and principles — are statable in quantitative, mathematical form.

In keeping with these criteria, it is safe to say that such a field as biology is properly rated as a science, since (1) the data of living structures may have practical discussion somewhat apart from the abstractions of such other sciences as physics and chemistry; (2) biology employs typical laboratory measures in studying its problems; and (3) biology states its findings in definite, hence quantitative terms.

**Psychology as a science.** Psychology has had a checkered career in its evolution toward the sciences. In the first

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place, it had to become freed from the all too kindly influences of philosophy and religion. In the second place, and of perhaps greater significance, it has taken many years for a decision to be reached regarding the field which psychology might legitimately claim. The history of psychology reveals several attempts at defining its field, and different periods have considered it as the science of the soul, mind, consciousness, etc. When the trained workers in the science have had real difficulty in agreeing upon the area of labor, it is not to be wondered at that many "quacksters" claiming to be psychologists have come forward with an endless array of pseudo-scientific facts and have sold their wares with a success indirectly in proportion to the mentality of their purchasers.

For the practical purposes of the present work, psychology may be defined as the *science of human behavior*. In keeping with the demands laid upon all sciences, psychology works in a field sufficiently distinct from the other sciences to warrant fairly independent handling. This is the field of human activity, interactions, or behavior. While it is often found of great, even though needless, difficulty to keep psychological discussions from incorporating too much of the broad biological field of which it is properly a part, it proves relatively easy to present the laws, facts, and principles upon which the behavior or activity of a human group or its several individuals rests. Again, psychology as above defined makes it possible and essential to secure observational findings under the rigidly controlled conditions of the experimental laboratory, the classroom, or other places of group or individual activity. Finally, psychology as a science has learned to em-

ploy mathematical concepts in stating its findings, and, by means of its own yardsticks, has long since learned to state many of its data in the exact quantitative terms demanded of all sciences.

**The nature and scope of psychology.** Some one has said aptly that the world with the human left out of it becomes one of physics and chemistry; with the human included, it is one of psychology. Only a brief moment of reflection is required to show that any single occurrence, even such an abstraction as a chemical reaction in a test-tube, becomes proper subject-matter for psychology just so soon as the observer — that is, the human being — is brought into the situation. When we consider further that the human is so organized that he must behave with reference to and react upon countless influences — associates, newspapers, schools, politics, etc. — the range of possible discussion for psychology becomes practically unlimited.

This is exactly as it should be, for the time is past when the human can be viewed in any other way than as a biological organism. Everything entering to control the behavior of this organism must be an appropriate fact for psychology. At times the best approach to the problem of human behavior may be from the side of the mental powers expressing themselves; again, from the physiological, wherein the major concern has regard to the physical portion of the psychophysical organism; and, finally, from the observations made external to the individual and quite apart from what may be going on either in his own mind or body.

The fact of fundamental importance for psychology is, then, that of human behavior viewed in the large and most

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comprehensive sense. It is clear, of course, that, if a full account is to be given of the facts of human behavior, quite substantial inroads will have to be made upon biology, sociology, neurology, medicine, anthropology, even physics and chemistry, for all these bring their facts to deposit side by side with the strictly mental facts in order that the human reactions may be understood.

**Psychology in its applied aspect.** The ultimate aim of any science is not the complete and systematic grouping of its material and giving explanation to its occurrences; rather, it consists in predicting and controlling its phenomena in order that human welfare may be advanced. The knowledge of a science being made to function in the meeting of human wants elevates that science from the *pure* to the *applied* field.

Psychology as a pure science concerns itself with the laws, facts, and principles upon which human behavior, viewed from all angles, rests. In its applied aspect, its concern is the prediction and control of human behavior. Unfortunately, psychological facts have often been employed for controlling human action for ill, as in the case of fake advertising, allegements of cure, etc.; but its more substantial forms exist in such applied fields as advertising, salesmanship, personnel, social work, law, medicine, religion, and education. The trained worker in each of these fields knows the laws, facts, and principles upon which behavior rests, has developed a psychological technique and attitude, and applies these as tools in the prediction and control of the individuals with whom he works.

**Adolescent psychology and its applied aspect.** For purposes wholly practical for furthering its discussion, psychol-

ogy may divide its very extended field into fairly small units, and discuss these separately. Hence may result individual in contrast with social psychology, normal with abnormal, pure with applied, subjective with objective, human with animal, as well as experimental, physiological, genetic, ethnic, etc. An old distinction is that between general and special, the former suggesting the behavior of the normal adult human being; the latter the behavior in some non-adult period, in this instance giving such divisions as the psychology of childhood, or the psychology of senility.

The psychology of adolescence is quite properly part of the field of special psychology. The first concern of the present work will be to present the special facts upon which human adolescent behavior rests. Then will follow the application of these facts to the prediction and control of the adolescent in his school or educational relationships.

The general facts of adolescent psychology will include the physical and physiological aspects of adolescent behavior; the basic reacting factors of both the instinctive and learned; the systematic mental factors of intellect, emotion, and volition; and finally, adolescent personality.

The applications of adolescent psychology to the educational problems as faced by the junior high school pupil will include the psychology of study, with special reference to supervisory and grouping problems; the psychology of socialization; and finally, the psychology of guidance.

In carrying out the above program, the criteria of a science, especially the experimental and quantitative aspects, have been kept constantly in mind. This has made it necessary to distinguish between opinion and fact, and between

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questionnaire and research findings. In the endeavor to make the contribution of scientific merit, much interesting discussion often found in earlier texts on adolescence has been eliminated. This has been done not only because of the questionable accuracy of many previously phrased statements, but also because of the obligation set that all inclusions must have immediate relation to the particular problem of predicting and controlling the behavior of the junior high school pupil.

In passing to the text proper, it is well to know that, in presenting Section I, there has been no attempt to make the general features of adolescent psychology simple and elementary. The writer is convinced that there exists a tendency to administer altogether too diluted and "popular" treatments in the scientific field of psychology. Hence he presupposes a familiarity at least with introductory psychology. In so far as the reader does not readily see illustrations for certain laws and principles stated, he is referred to the concrete questions following each chapter, as well as to the applied aspects of adolescent psychology (Section II).

### QUESTIONS AND PROBLEMS

1. How separate and distinct are the special sciences, for example, physics, chemistry, biology, anatomy, astronomy?
2. Why have the definitions of psychology as the *science of mind* and *science of consciousness* been avoided by recent writers on psychology?
3. Differentiate between psychology as the science of human behavior and behavioristic psychology.
4. Has applied psychology problems to face different from those of other applied sciences?
5. What practical claims for attention may the psychology of adolescence properly make in the present stage of educational development in the United States?

6. Make a list of twelve important problems of behavior with which you think adolescent psychology should be concerned.

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**SECTION I**  
**PSYCHOLOGY OF THE JUNIOR HIGH SCHOOL PUPIL**  
**(GENERAL)**



# PART I

## ADOLESCENCE AND GROWTH

### CHAPTER I

#### PHYSICAL GROWTH OF ADOLESCENTS

UNDER a strict definition of terms, physical facts may be kept apart from the psychological. However, if the student is to receive knowledge of all that enters into the determination of adolescent behavior, it becomes necessary to discuss the physical aspects of adolescent growth. This is done in Chapters I to III, following which the strictly behavioristic and mental aspects are treated.

**Definition of terms.** Adolescence (Latin *adolescere*, to grow, to grow up to maturity) and puberty (Latin *pubertas*, puberty, the age of maturity, the signs of puberty, the hair on the chin, virility, etc.) stand as terms of century-old importance to denote the phenomena of "teen-age" growth, noted and significantly taken account of by practically all races, savage and civilized. Attempt will be made later to throw some statistical light upon the exact onset of adolescence and the phenomena of puberty. For the present one may think of the period of puberty as that initial stage of adolescence at which the individual becomes capable of begetting or bearing offspring. This maturing of the reproductive powers, with all their physiological, mental, and moral connections, suggests the essential character of the entire adolescent period. The youth is outgrowing the character-

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istics of childhood and is taking upon himself the powers of manhood. Biologically, adolescence means the period from the beginning (puberty) to the attainment of full growth of the sex function.<sup>1</sup>

Since all human traits — physical, mental, social — vary in keeping with the normal curve of distribution, the onset of puberty may vary over a wide period of years. For immediate and practical purposes, we may place the twelfth-thirteenth year as the mean (average) chronological age marking the onset of puberty among girls, the fourteenth among boys. The variability aspects of these generalizations, however, need immediate emphasis, as a glance at Crampton's oft-quoted results will show. (See Table I.)

TABLE I. VARIATION IN PUBESCENCE OF 4800 BOYS IN A NEW YORK HIGH SCHOOL (*Crampton*)

MEDIAN AGE ( <i>Approx.</i> )	IMMATURE OR PRE-PUBESCENT	MATURING OR PUBESCENT	MATURE OR POST-PUBESCENT
12.75	69 per cent	25 per cent	6 per cent
13.25	55	26	18
13.75	41	28	31
14.25	26	28	46
14.75	16	24	60
15.25	9	20	70
15.75	5	10	85
16.25	2	4	93
16.75	1	4	95
17.25	0	2	98
17.75	0	0	100

<sup>1</sup> Throughout this work the concern will be with early adolescence; that is, the junior high school period, for the entire period, of course, extends to manhood. See Chapter III for the Periods of Life.

**Growth and bodily parts.** Before seeing adolescent growth in its totality, it will prove valuable to take up, in some detail, the specific physical changes of bodily parts during adolescence. Growth of the many different organs of the adoleseing body may vary in several regards; namely, the beginning of the period of rapid growth, rate of participation in the general growth changes, and the attainment of maximum growth.

### *1. Gross bodily growth*

**The skeletal system.** The growth of bones is marked by the rapidity and the completion of the process of ossification. In the first particular, the bones of the extremities grow markedly longer and thicker, while head and trunk bones show marked changes in general size, shape and proportions; for example, the chest grows laterally, face lengthens, lower jaw becomes heavier, second dentition is completed, etc. In the second, the remaining soft cartilaginous substances gradually ossify, notably in the bones of the skull, jaw, and the small bones of the wrist.

**The muscular system.** Muscular growth is extremely rapid, as shown by the following facts comparing the muscular system with the weight of the entire body: newborn child, 23.4 per cent; 8 years, 27.2 per cent; 15 years, 32.6 per cent; 16 years, 44.2 per cent. The muscles, individually and collectively, differ from those of the adult in accuracy, strength per unit of cross-section, bilateral symmetry, accuracy of coördinations, etc., emphasizing, together with the likewise irregularities and inequalities of skeletal growth, the cause for much of the clumsiness typical for this or any other stage

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of very rapid physical alteration. Smedley has pointed out the superior strength of grip shown by adolescent boys, and Hall has emphasized both the individuality of growth of the various muscles, and that curves for strength do not parallel those for speed and accuracy of movement.

**The respiratory system.** With the enlargement of the thoracic cavity, the vital capacity of the lungs shows marked increase. Whipple shows that this trait increases rapidly in girls from 12 to 14, thence slowly until 20, while for boys the rapid increase is from 14 to 19.5 years. The capacity is consistently lower for girls than boys at every age, and the effects of special exercises and breathing habits are especially noticeable with the former. Both sexes are likely to harbor considerable unused lung tissue during the period, and tendencies to anæmia, tuberculosis, etc., tend to become deep-rooted or unseated in terms of the attention given to chest development, good bodily posture, deep breathing, etc.

In connection with respiration may be mentioned the marked changes in voice so characteristic for adollescng males. This is largely muscular in basis, due to growth of the larynx and approximately the doubling in length of the vocal cords. Hence a final drop of generally a full octave in pitch for the boy, the change for the girl being primarily to achieve a richer and fuller voice quality with pitch remaining approximately constant. The pronounced voice mutation for the boy may begin as early as twelve, or, in case of many typical sopranos in male choirs, remain treble even to the late teens. During the period of mutation (ordinarily two years) the voice naturally "breaks" in pitch, becomes easily hoarse and rough, gets out of control, and may easily become

cracked unless singing in very high or low registers is carefully avoided.

**The digestive system.** The digestive system comes in for its share in the energies available for growth in marked ways. The stomach becomes larger, less vertical and tubular than with the child, and stronger in its peristaltic movements, with perhaps some alterations in the gastric secretions. The intestines increase in length and capacity; the liver, which at birth is one eighteenth the size of the body, becomes relatively smaller, reaching one thirty-sixth with full adult growth. Metabolism seems less rapid than in childhood, with a less rapid heat loss and relatively smaller heat production. The factors influencing metabolism so unfavorably in the child (insufficient and improper food, deprivation of exercise, lack of fresh air, etc.) of course still function for the adolescent, but apparently resistance is becoming stronger as the energy reserve becomes stronger. Little is known as yet regarding the exact physiological, chemical, and especially the psychological factors involved in a science of adolescent nutrition.

**The circulatory system.** Landois has shown how this system responds to the rapidity of adolescent growth. The heart ratio becomes increasingly large with the passage from birth to maturity (25:20 at birth, 140:50 at puberty, 290:61 at maturity); hence the blood pressure at puberty is high. The heart muscles themselves increase in size and in the number of contractile fibers. With some changes in the specific gravity of the blood (perhaps limited to girls) and a slight rise in bodily temperature (about  $0.5^{\circ}$  F.), there is presented the picture of the heart becoming rapidly adjusted in adoles-

cence to send an increased and enriched blood supply to nourish and build up the rapidly growing structures and to supply energy for the new bodily functions.

**The reproductive system.** With adolescence being characterized quite largely by maturation of sex, it is to be expected that the reproductive system shares quite largely in the general growth phenomena of the period. Of course this sex growth involves far more than can be expressed in terms of mere anatomy and physiology; it especially involves glandular maturity and functioning, all sorts of secondary sex characteristics and mental phenomena. (See especially Chapter VIII, "Emotion and the Adolescent.") The more physical facts are a general rounding-out of the body toward the adult form, especially the pelvic system; with the girl a striking development of the hips and mammæ, and a deposition of adipose tissue; both sexes obtain a new hair growth on the pubic and other erogenous areas, this likewise extending to the face and often the trunk of the male. The reproductive organs proper show marked increase in size, as well as in changed internal structure pointing to the capacity to secrete the reproducing cells (spermatozoa and ovum), as well as the sexual autacoid largely conditioning the development of secondary sex characters.

## *2. Growth of the nervous system*

**Little neural change.** Comparative neural anatomy offers little data to the student of adolescence. In gross terms, there is practically no adolescent increase in brain weight, nor in cord and nerve tissue. Psychologists have undertaken to find neural parallel for the always stated augmen-

tations of the psychic life of adolescence, notably (1) "the awakening of new instincts with their resultant emotions, and (2) the elaborating of intellectual life in general and the marvelous possibilities for the individual that lie in this direction."<sup>1</sup> The tendency to make neurological findings fit psychological beliefs is well shown by the following:

There is now no doubt about the processes of cell division being completed at birth. During the pubertal period the number of *mature* cells doubles, the new cells being developed from granules; and, according to the same authority, Kaiser, followed by Hall, "in the boy of fifteen, the volume of cell bodies is already, on the average, one hundred and twenty-five times their size at birth"; thus there occurs during a year or two of early adolescence a remarkable and significant cell development in the form of functional maturing and probably awakening of brain tracts hitherto dormant. All this accounts for the new instinctive tendencies and new emotional experiences, which come to occupy the center of the psychic stage and so largely dominate the conduct. But, while these important cell and tract developments are taking place, there is going on an equally important extension and ramification of the fiber processes, especially into the higher thought areas of association. First come the tangential fibers, connecting the different parts of the cortex; then the systems of fibers among the cortical cells slowly evolve, the evolution of some continuing until late in life. It seems certain, also, that the later years of adolescence are almost as epochful as the earlier years, since the brain increases enormously in complexity after sixteen, the growth extending into regions that were less rich in early adolescence. This rapid extension and developing complexity of the various fiber systems seem naturally to furnish the physical basis for the growth of intelligence which characterizes adolescence and takes the form of rational thought, higher logical correlation, independence in opinion, and æsthetic appreciation. Thus it would appear that Aristotle was wise, without knowing the physical basis of his doctrine, in assigning fourteen as the age at which the education of reason should begin.

<sup>1</sup> Pringle, R. W., *Adolescence and High School Problems*. (D. C. Heath and Company, 1922.)

The correctness of all the inferences just made relative to the causal relations existing between known developments of brain structure and the rapidly maturing psychical powers finds much support in the fact that poor nutrition, from whatever cause, always checks the structural development of the brain and retards in a serious way nearly all mental growth; hence the inference that the two phenomena just described, not only parallel each other, but are causally related. Beyond doubt, the foregoing emphasizes the fact that this is the formative period of life; and we have, as James and others have pointed out, in this structural maturing of the brain, the physiological basis of personal development; it is the time par-excellent to "help nature."

Much of the above is neurologically in question, and the psychology is, in the judgment of the writer, quite inaccurate. No new instincts appear at adolescence; no marked growth in intelligence, with special reference to "rational thought, higher logical correlation, independence of opinion, and æsthetic appreciation," is shown by the growth curves of intelligence; emotional enrichments are quite probably largely determined by new glandular attainments and resultant autonomic activities; the bulk of the psychic phenomena of adolescence is due not so much to an adolescent renaissance as to (1) the gradual accumulation of experience in the form of habits and modifications made in unlearned ways of behaving; (2) the wider range of social situations in which the maturing individual has to move by virtue of social pressure; and (3) the physiological maturing of the sex functions.

### *3. Growth and functioning of the glandular system*

**Glands; duct and ductless.** The significance of glandular functioning in all animal existence, and especially for pubertal and later adolescent growth, is just coming to be recog-

nized. While too little is known as yet regarding glandular changes at adolescence, enough facts have been established to warrant a fairly extended description, at this stage of the discussion, of the fundamental characteristics of a few typical glands. Added reference will be made when the psychology of adolescent emotion is treated in Chapter VIII.

By glands is meant the peculiar cellular groups of effectors or expressive organs (sharing herein with the skeletal and smooth muscles) functioning primarily in the digestion of food, the regulation and control of growth and metabolism, and in the elimination of waste materials from the body. These functions are mediated primarily through secretions delivered through definite outlets (duct glands), or absorbed directly into the blood stream (ductless glands). Among the former may be cited the glands of the stomach (pyloric and fundic), the three pairs in the mouth cavity (parotid, sublingual, submaxillary), pancreas, liver, kidney, and the sweat and sebaceous glands of the skin. Among the latter, or endocrine glands (these all producing an autacoid substance which is passed into the circulatory fluid, and ultimately produces effects on certain organs similar to those produced by drugs), may be mentioned the thyroids, suprarenals, pituitary, pineal, pancreas, and the sexual glands. In general the duct glands largely are innervated by the autonomic nervous system, and are highly modifiable by habit influences.<sup>1</sup> The ductless or endocrine glands connect up directly with the several divisions of the autonomic nervous system, and

<sup>1</sup> See the classical works of Pavlow, Lashley, Cannon, and others, and bring into conjunction with the conditioned reflex, as subsequently treated in Chapters VI and VIII.

play a stellar rôle in emotional behavior.<sup>1</sup> The emotional features of adolescent life bulk far larger than the intellectual, and the reader must henceforth "pull to earth" such emotional signs as adolescent love, hate, rage, fear, "pep" and "drive," depression, etc., by relating them quite directly to the results of glandular growth and activity. The principal endocrine glands affecting adolescent behavior merit a few words of special treatment.

**Thyroid.** The thyroid apparatus is situated on either side of the larynx and windpipe. The autacoids of the parathyroid seem to prevent to some degree the over-exertion or discharge of nerve cells, and to exert some metabolic influence. The thyroid proper plays a tremendous part in the growth process. Experimentation has shown that the early removal or spontaneous atrophy of the organ results in a marked arrest of bodily growth, especially skeletal, delayed development of the generative organs and the cortical cells of the cerebrum, dry skin, thin hair, pale and puffy face, swollen abdomen, fontanelles remaining open, etc., this describing that form of growth arrest known as *cretinism*.

In cases of thyroid atrophy (myxœdema) after adolescent growth is attained or well in process, many of the above symptoms appear, and in addition a lowered sensibility and behavior in general, diminished metabolism, increased deposition of fat, decreased sex powers, etc. This symptomology tends to clear up with the feeding of thyroid substances. When too great an amount of the thyroid secretion is administered, the picture resultant is practically the equivalent of

<sup>1</sup> Cannon, W. B., *Bodily Changes in Pain, Hunger, Fear, and Rage*. (D. Appleton and Company, 1915.)

that found in exophthalmic goitre so often found in adolescent girls (occasionally with the male), namely, nervous excitability, lower blood pressure, rapid and irregular pulse, flushed and perspiring skin, perhaps dilation of the pupil, occasional great excitement, sleepiness, tremors of the limbs, and a marked decrease in body fat. In addition to its power to increase the excitability of the nerve cells, the thyroid must grow and function normally if the generative glands are to develop perfectly; otherwise, sexual infantilism generally results.

**Suprarenals.** The adrenals, in close connection with the kidney, consist of two parts: (1) cortex, probably functioning for the development of the sex organs; and (2) adrenal medulla, degeneration of which brings a remarkable lowering of the entire bodily tone (Addison's disease) and removal always resulting fatally. Administering the autacoid, adrenin, sets up the customary conditions established automatically through increased glandular secretion and discharge during intense emotion of any kind — the liver releases its stored glycogen or sugar, this providing an easily assimilable food for the muscles and other tissues; coagulation of blood is hastened, and constriction of the small blood-vessels results (Cannon). This entire group of responses resultant upon adrenal functioning are to be viewed as "factors in the preparation of the body to meet the demands of a crisis and the emotion as the awareness of these changes." In addition to the marked rôle played in "building-up" the emotional setting by the release of adrenin, the adrenal shows a very close relationship to the sex glands, especially during pregnancy.

**Pituitary.** This small organ (*hypophysis cerebri*) at the base of the brain has two embryologically distinct structures, separated by an *inter-glandular cleft*. X-ray pictures of the pituitary region often reveal bad bone formation which results in improper glandular size. This irregular development may in turn dwarf or exaggerate adolescent growth and occasionally causes radical mental disorders. Continuous artificial feeding often produces very marked increases in height, cutting down excess fat, improvement in general mental tone, etc. Too excessive activity of the anterior lobe is productive of the gigantism sometimes seen in the preadolescent period, with the fairly typical enlargement of the facial bones and extremities in adults (acromegaly); too diminished secretion of the posterior lobe produces marked obesity and sexual arrest or infantilism. Adolescent growth and metabolism in general seem stimulated by the autacoid of the anterior lobe, fat production and regulation of the reproductive organs being influenced by that of the posterior.

**Pineal.** This small brain structure seems to operate in childhood to retard growth. At puberty it should normally prove degenerating, hence the absence of its inhibitive autacoid making adolescent growth relatively unchecked. Disturbance of this gland in childhood results in a premature development of the reproductive organs, increased skeletal growth, and precocity.

**Sexual.** The rapid growth phenomena of the sex apparatus is, of course, characteristic of adolescence. In the male are found the testes as tubular glands of both external and internal secretions; in the female the ovary specialized as

well for external and internal production. The masculine gland functions specifically to produce the reproductive spermatozoa; the female the ovum. In addition, each organism produces an autacoid which apparently controls the development of the so-called secondary sex characteristics so prominent with the onset of puberty. Castration or sexual infantilism results in an inability to respond to normal sex stimuli, and in a failure of the secondary sex characters to develop. Recent work on glandular transplanting, although still somewhat in the experimental stage, shows, especially with lower animals, the remarkable strengthening of sex activity in all regards when healthy glands are transplanted.<sup>1</sup> Specifically, the cells of Leydig are apparently functioning to produce the autacoids basic to the development of sexual characteristics, and to stimulating sex operations. Evidence as to reproductive efficacy after glandular transplanting is less reliable than that for the reappearance of secondary sexual characteristics.

The rather extended fractional study of adolescent growth made in the preceding paragraphs has sufficed both to show its character and the factors conditioning it, as well as the basis for much of the complexity, variability, and instability shown in adolescent behavior, viewed either objectively (physically) or subjectively (psychologically). The chapter immediately following will be concerned with a total rather than a fractional study of adolescent growth.

<sup>1</sup> For a summary, see Stone, C. P., "Experimental Studies of Two Important Factors Underlying Masculine Sexual Behavior"; in *Journal of Experimental Psychology*, vol. VI, no. 2. (April, 1923.)

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### QUESTIONS AND PROBLEMS

1. Justify the inclusion of facts relating to the anatomical and physiological growth into psychological discussion.
2. List all secondary sex characteristics you can detect among pubescent boys and girls.
3. Catalogue fetishes and sex charms observed in a group of high school students.
4. Inspect all available children approaching the adolescent age with special reference to gross growth defects related to glandular functioning — for example, cases of cretinism, gigantism, etc. — and study such cases for mental and physical abnormalities.
5. What evidence can you adduce for the following phenomena commonly assigned to adolescence: increased auditory acuity, new “skin consciousness,” new interest in odors (perfumery, scented soap, powder, etc.), new stage (“puppy love”) of love?
6. Does it seem likely true that the “glands dominate personality”?

## CHAPTER II

### ANATOMICAL AND PHYSIOLOGICAL AGE

WITH the accumulation of repeated observations of the mental and physical development of school children during the period of growth, this following none too rapidly upon the great mass of educational statistics collected during the past two decades, it is becoming justified and necessary to speak of several ages when a complete evaluation of an individual's or a group's growth is desired.

**Ages characterizing growth.** By *chronological* age is meant age expressed in actual years, months, and days. *Anatomical* and *physiological* age denote respectively the strictly physical (anatomical) growth, and the accompanying stages of maturing as indicated by such factors as metabolism, eruption of teeth, functional changes of voice, sex, etc. *Educational*, *mental*, *moral-social*, and *religious* ages denote mental rather than physical development as measured respectively by school attainment, the development of general intelligence, ability to effect socially approved group adjustments, and development of religious beliefs and practices. Normal growth consists essentially in a balanced development along all lines suggested by these so-called "ages." That children of the same chronological age may vary greatly in respect to their anatomical-physiological and the more psychical features of growth becomes increasingly established with the passage of each year, as a long period for measurement is essential. Kammerer, Dearborn, Wiss-

ler, and others — notably Baldwin and Terman — are furnishing significant contributions for our immediate interest in adolescent growth.

**Measurable factors in anatomical age.** Baldwin's recent publications <sup>1</sup> show quite in detail the representative facts of growth, as determined by annual measurements of four hundred children during the 6 to 17 year chronological span. Height, weight, sitting height, chest girth, breathing capacity, and strength of arms and upper back were considered. Typical height and weight curves, as well as the percentage distribution for each trait from 6 to 18 years, are shown by Baldwin (pp. 74, 75, 149, 150) as well as in the accompanying figure (Figure 1).

The following deductions can be made from these curves, taken in conjunction with the large mass of statistical and graphical material collected, in most particulars these endorsing the earlier findings of Boas, Smedley, and Whipple:

(1) Boys lose their height and weight superiority at puberty, the adolescent acceleration of growth coming on the average from one and one half to two years earlier for the girl than the boy. This loss is regained shortly after the boy reaches his period of rapid growth, and is not again lost.

(2) The other anthropometric measurements show the same earlier spurt of growth in the girl, although in general absolute superiority in breathing, strength of arm and back muscles, etc., are not attained during the 12 to 14 year period of masculine handicap.

(3) The period of adolescent growth for both sexes is pre-

<sup>1</sup> Baldwin, B. T., *The Physical Growth of Children from Birth to Maturity*. (University of Iowa Studies in Child Welfare, Bulletin 1, no. 1, 1920.)

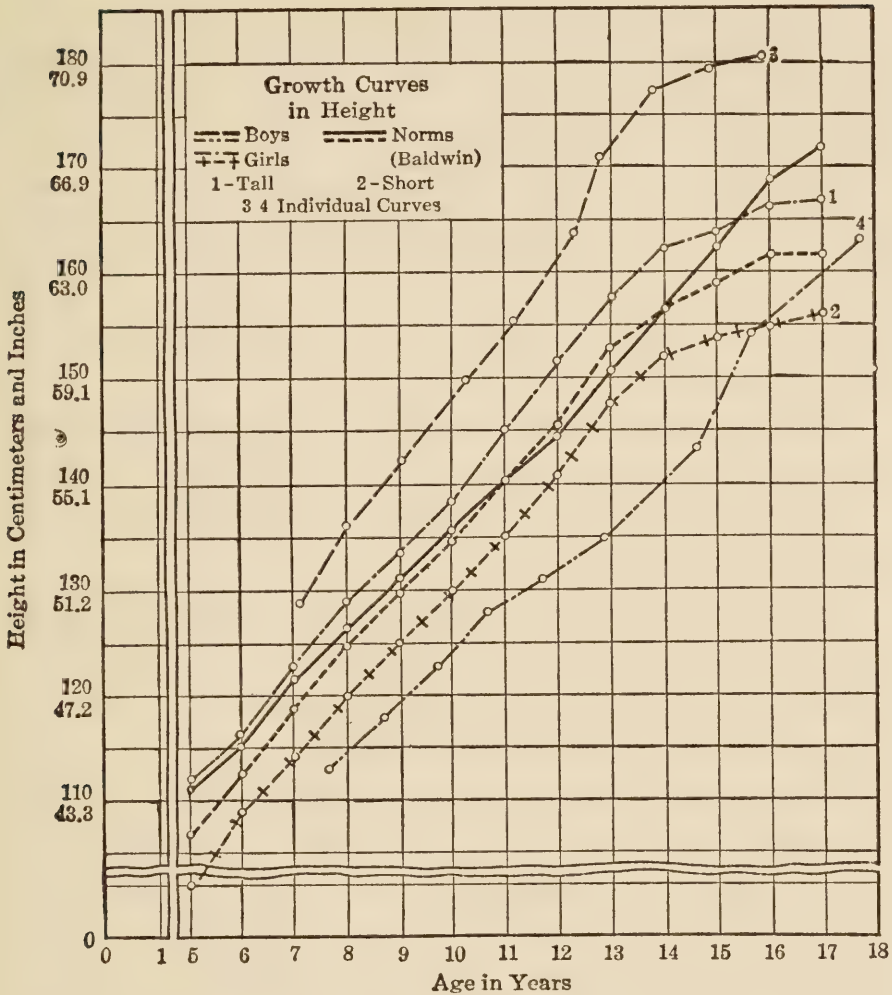


FIG. 1. SHOWING GROWTH CURVES IN HEIGHT FOR BOYS AND GIRLS

(From Baldwin's *Mental Growth Curve of Normal and Superior Children*, p. 13)

viewed by rather normal increases, there being little or no evidence for a pre-adolescent spurt.

(4) Taller boys and taller girls both reach their periods of maximum and of diminution of growth earlier than shorter boys and girls.

(5) Retardation before or during the earlier years of the

adolescent period tends to be followed by a period of quite rapid acceleration during adolescence, and the later the growth spurt appears the more rapidly the adolescent growth period is hurried through.

(6) Individuals of both sexes maintain relative superiority or inferiority through the period of growth; that is, tall children do not become short as youths, etc.

(7) Predictability is comparatively simple for final height, but not for weight.

(8) The variability of both sexes for any physical trait at any single chronological age is very marked, this tending to increase with age up to and including the first few years of adolescence.

(9) Correlation between practically all the physical measurements is markedly positive, higher for boys than girls, all tending to be highest during early adolescence and beginning to decrease after fourteen years of age.

(10) Adolescent males tend to be more variable in physical traits than females, but "both sexes lose not only variability, but correlations as they grow older" (Pearson).

**Roentgenograms as criteria of anatomical age.** Rotch, Pryor, Baldwin, Dearborn, Prescott, Lincoln, and others have studied anatomical age by X-ray pictures, it having been shown that the transformation of cartilaginous into osseous tissue proceeds by regular and well-defined stages, these appearing most clearly in the carpal bones and the epiphyses of the hand and wrist. Rotch found that anatomical development as herein measured proceeds fairly independently of chronological age, even of height and weight, and that size and chronological age often tell nothing about the

stage of anatomical development reached. He further shows that girls are at all ages more advanced than boys regarding epiphyseal development, hence contradicting the findings for the objectively measured features reported in the immediately preceding paragraph, as these showed the rather 11 to 14 year handicap under which the male labors.<sup>1</sup> Typical changes in ossification just before and after the beginning of puberty are shown in the accompanying photographs. It is extremely likely that X-ray photographs of carpal ossification soon will justify important age, sex, and racial generalizations regarding anatomical age, and that anatomical indices may play some prominent part in deciding doubtful cases of school promotion, classification, etc.

**Physiological age.** Functional or physiological maturity offers significant features of study. Crampton's<sup>2</sup> excellent study, nearly two decades ago (see Chapter I), was directed toward the age at which the three stages of pubescence distinguished by him appeared in nearly four thousand unselected boys in the New York City high schools. Crampton showed that, with thirteen and three fourths years taken as about the beginning of the high school period, the number of pre-pubescents, pubescents, and post-pubescents is almost exactly equal.

Baldwin's findings confirm Crampton's as to the wide variability manifested in physiological maturing. His data are based upon nearly five thousand boys, widely selected.

<sup>1</sup> See Terman, L. M., *The Hygiene of the School Child*, p. 71, for extensive bibliography. (Houghton Mifflin Company, 1914.)

<sup>2</sup> Crampton, C. W., "Physiological Age"; in *American Physical Education Review*, March to June, 1908. "Anatomical or Physiological Age *versus* Chronological Age"; in *Pedagogical Seminary*, 1908.

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(The criterion held was that of pubescent growth and pigmentation of fine hair, which portray the very brief period of time, five to seven months, marking the change from asexual to sexual life, when power of procreation is established.)<sup>1</sup> The range for years is indicated as follows, with the pubescent mode at  $13\frac{1}{2}$  and 14 years for country and city boys respectively:

	COUNTRY BOYS	CITY BOYS
Pre-pubescent . . . . .	$8\frac{1}{2}$ -16	$9\frac{1}{2}$ -17 $\frac{1}{2}$
Pubescent . . . . .	$9\frac{1}{2}$ -15 $\frac{1}{2}$	10 -18
Post-pubescent . . . . .	$11\frac{1}{2}$ -24	$12\frac{1}{2}$ -24

In the case of girls reaching physiological maturity, the criteria regularly considered are the first menstrual flow, enlargement of the breasts, the appearance of subcutaneous fat and axillary hair. Baldwin's results for nearly five hundred girls, unselected except that they were all from middle- or upper-class homes, showed, as in the case of boys, no fixed chronological age for physiological maturation, the norm for pubescence being a distribution range and not an average chronological age. In fact, both boys and girls are found of the same chronological age, between ten and one half and sixteen and one half, who differ in physiological age from one to five years and still are physically well developed for real age. Finally, there is a 10 to 17 year age range of first menstruation for normal girls, with thirteen years seven and one half

<sup>1</sup> Pubescence as objectively rated above is proving not a sufficiently adequate criterion of the primal secretion of the sperm cell. A better technique is under construction in several quarters at present.

months being the median maturing age for country- and thirteen years nine months for city-bred girls respectively.<sup>1</sup> Finally, early maturing girls are on the average close to the height norm for girls, and this early maturing is generally followed by a rapid cessation of growth in stature, while late maturing brings a delayed decrease in growth increment.

**Factors affecting anatomical and physiological growth at adolescence.** The keynote of all the previous discussion of growth has been *variability*. Certainly many factors are at work to influence the onset of adolescent maturation. The first group of these may be thought of as hereditary; for example, Jewish stock matures earlier than the Indo-European, the Latin than the Teuton; climatic conditions may occasionally affect to degree, although the older general statement that children in the tropical countries mature precociously is discredited; family heredity, or immediate ancestry, may play a strong rôle, this often relating to basic temperamental endowment; of course, sex is a strong determinant.

The second group of factors conditioning adolescent growth may be thought of as external or accidental. Among these may be mentioned the following: Glandular influences, as shown in Chapter I, either to hasten or delay maturity; diseases, hardships, privation, mental anxiety, care and excess responsibility all tend to have a retarding effect; bad economic and social conditions—for example, unsuitable and unnutritive diet and insufficient clothing, overwork, lack of parental care as regards sleep, exercise, personal habits, etc.

<sup>1</sup> Baldwin, B. T. *The Physical Growth of Children from Birth to Maturity*. (University of Iowa Studies in Child Welfare, Bulletin 1, no. 1, 1920.)

— reflect themselves in subnormal height, weight, etc.,<sup>1</sup> social class being almost as potent a determinant of size as is race, and the children of the poor reaching the onset of adolescence one to two years behind the upper classes; city versus country rearing, as shown earlier in the present chapter; hygiene and exercise; perhaps pampering has occasional influence to accelerate, excessive school requirements to retard.

The above paragraph naturally suggests the matter of health. During especially the early years of the adolescent period, many ailments make an appearance — for example, anæmia, scoliosis, headache, indigestion, nosebleed, insomnias, eye-strain, nervousness, palpitations of the heart, although these tend to be generally petty and far from universal even among girls. Foreign studies, notably by Hertel, Schmid-Monnard, and Khlopine for Danish, German, and Russian school children respectively, show a remarkable increase of morbidity with age in general and adolescence in particular, although the rapid increase results probably not so much from the general physical shake-up incident to adolescence as the increasing strain occasioned by school duties, long sessions, home study, etc. Johnson's study for American high school pupils showed that those of poorest health studied harder, took more private instruction, and slept least. All in all, however, resistance to illness and disease is very strong. The United States Census Report indicates the smallest percentage of deaths occurring between the ages ten and fourteen; Hartwell's study of the Boston death-rate showed the period of pubertal change the lowest.

<sup>1</sup> Robert's *Manual of Anthropometry*, p. 32. (London, 1878.)

In other words, the rapid-growth period of adolescence shows wonderful vitality and resistance powers should ill-health tend to occur.

With so many factors at work to produce variations in anatomical and physiological growth, it is reasonable to expect that individual differences in psychological, educational, and other ages may prove just as striking and significant for educational treatment as anatomical and physiological ages. Mental growth is discussed in the subsequent chapters, and certain pedagogical implications for the various growth phenomena are there stated.

#### QUESTIONS AND PROBLEMS

1. Attempt to estimate the several ages (anatomical, physiological, mental, etc.) of a twelve-year-old girl you are well acquainted with; compare with a twelve-year-old boy.
2. Do physical differences between the sexes during early adolescence justify different school treatment? Specify.
3. What progress has been made to date in the problem raised in question "2"?
4. Cite original illustrations for each of the factors listed as affecting anatomical and physiological growth at adolescence.
5. A well-known college professor of education was elected to the superintendency of a city school system. He held to a theory that chronological age should determine grade placement. Grades I-VIII were reclassified accordingly. Predict the results, especially for grades VII-VIII.
6. Is there justification for an adolescent school on the basis of facts presented in this chapter?

## CHAPTER III

### PSYCHOLOGICAL AND PEDAGOGICAL ASPECTS OF ADOLESCENT GROWTH

THE preceding chapters have sufficed to show not only the various striking physical phenomena of adolescent growth, but also that chronological age relates very poorly to anatomical and physiological age. It has been further shown that individuals tend to maintain, throughout their period of growth, an initial superiority or inferiority in physical stature, weight, etc. *Constancy* within reasonable limits seems the rule for individual physical growth from year to year; wide *variability* of growth attainment the rule for individuals of the same chronological age.

#### 1. *Mental growth*

The meaning of general intelligence, group and individual methods of measurement, the basic nature and character of its growth, significant measurable facts of adolescent mentality, etc., are treated at length in Chapter VII, on "Knowing and the Adolescent." The more general trends of psychological development in relation to anatomical and physiological growth of adolescence furnish the subject-matter for the present discussion.

Mentality and gross physical traits. The early work of Goddard with sub-normals largely started interest upon this problem of great general and educational moment. On

the basis of anthropometric measures of 10,844 mentally-defective cases, of all ages, he came to conclude as follows:

The above figures seem to warrant the conclusion that we have a remarkable correlation between physical growth and mental development. The low grade (idiot) has not only a disturbed brain function, but his entire organism is disarranged and growth processes upset. In the imbecile the same is true but to a less extent. In the moron we have the interesting phenomenon of practically normal growth during the immature years, but an arrest of growth earlier than in normals.

Doll, continuing with the same class of subjects, determined the following correlations:

TABLE II <sup>1</sup>

	BOYS	GIRLS
Mental age and stature.....	.31	.39
Mental age and sitting height.....	.41	.47
Mental age and weight.....	.23	.34
Mental age and right grip.....	.62	.69
Mental age and left grip.....	.81	.67
Mental age and vital capacity.....	.64	.63

Correlation determination with children of normal or superior intelligence has been somewhat tardy, primarily because of the quite proper delay incident to securing intensive consecutive studies, both mental and physical, through a long period of years on the same individuals. However, it seemed well substantiated by Porter, Woolley and Fisher, and others that a small yet positive correlation maintains between mental and physical traits within a normal group of children, and that pupils of whatever age above grade tend to

<sup>1</sup> The coefficients in this table were corrected by Doll for irrelevancy of chronological age.

be taller and heavier than pupils of the same chronological age below grade. In like manner Baldwin concludes that the physiologically-accelerated group studied completed the eighth grade with mean chronological and school attainment records of 12 years 9½ months, and 84.3 respectively; the physiologically retarded group with 13 years 7¼ months, and 81.7 respectively.<sup>1</sup> All studies until the past year or so have for the most part dealt with a single or very few measures of growth. The present trend is to base all analyses of growth upon a combination or battery of tests — anatomical (physical), physiological, mental, scholastic, etc. Results to date follow, although these are all subject to modification with continued refinement of technique, and long-carried-out consecutive measurements.

**The mental growth curve.** Results from the Iowa Child Welfare Research Station, whose interest is that of normal and superior children, provide statistics which throw some light upon mental growth preceding and during the early years of adolescence (typically the junior high school period). (See Fig. 2.<sup>2</sup>) The following conclusions seem warranted. Superior and average children develop toward and through early adolescence at different levels, becoming increasingly dissimilar with increase in chronological age. The prelude to adolescence is shown by a slight increase and tendency to depart from the straight-line relationship, this being characteristic for mentally superior children of both sexes and for average girls, the average boy continuing till the fourteenth

<sup>1</sup> Baldwin, B. T., *Physical Growth and School Progress*. (Bulletin 10, United States Bureau of Education, 1914.)

<sup>2</sup> Baldwin, B. T., *Mental Growth Curve of Normal and Superior Children*, vol. II, no. 1, p. 11. (University of Iowa Studies in Child Welfare, 1922.)

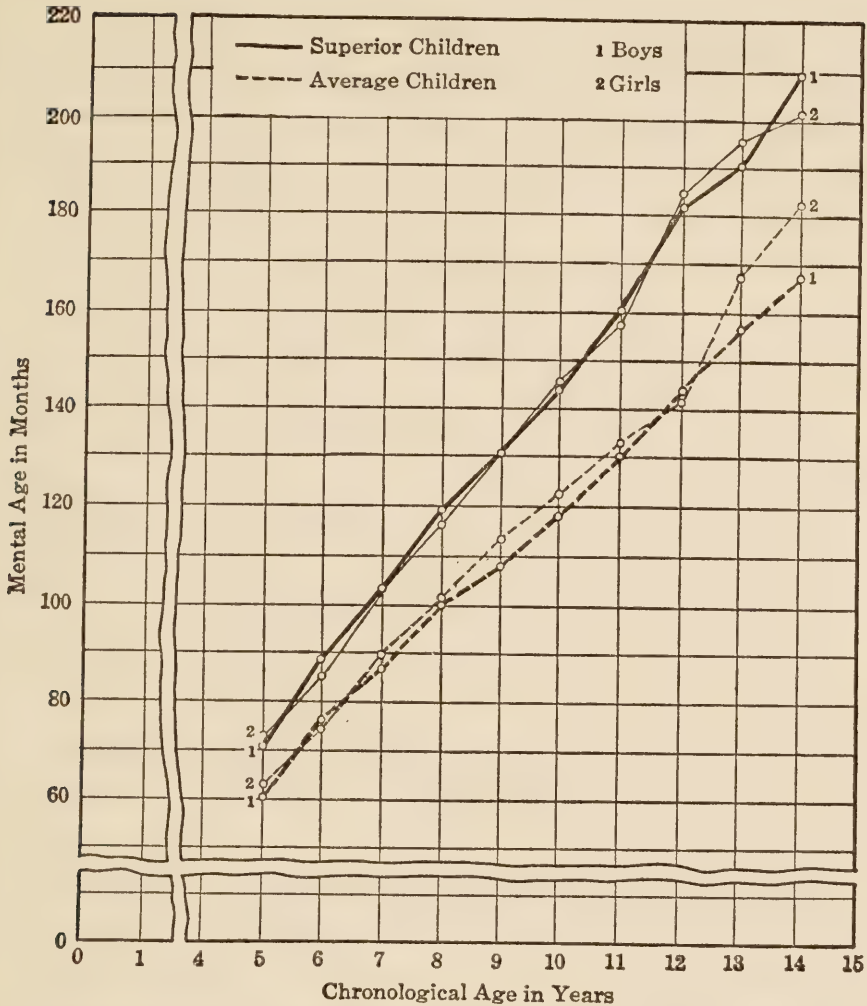


FIG. 2. MENTAL GROWTH CURVES BASED UPON A COMPARISON OF MENTAL AGE WITH CHRONOLOGICAL AGE

(From Baldwin)

year without any mental spurt. The mental growth curves for both superior and average groups show the female superior in intelligence during early adolescence, this corresponding with the superiority shown in anatomical and physiological growth, as set forth in Chapter II. Some evidence exists

for concluding that, although the I.Q. curves continue approximately horizontal in pre-adolescence and puberty, the two superior groups show a small mental spurt as the twelfth year approaches, the average girls showing their adolescent acceleration a year later. (See Fig. 3 and Table III.)

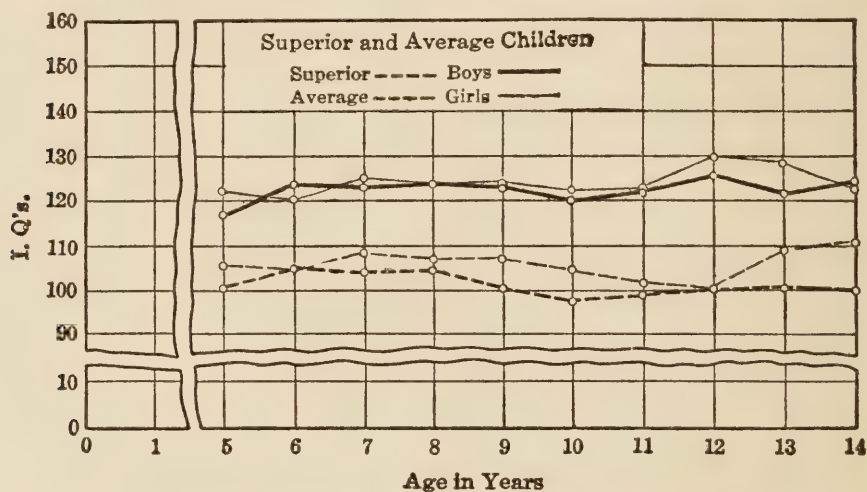


FIG. 3. SHOWING INTELLIGENCE QUOTIENT CURVES OF SUPERIOR AND AVERAGE CHILDREN

(From Baldwin)

**Predictability of adolescent intelligence.** With the general trend of most measurements published to date, regarding the constancy of the I.Q., to endorse the 1917 pronouncement of Terman regarding its approximate constancy, it seems fair to conclude as follows: adolescent mentality can be quite well predicted by pre-adolescent examinations, nearly all children keeping their intellectual status except feeble-minded, whose I.Q.'s show a tendency to decrease considerably (Terman). Variations between successive examinations appear — the girl appearing more variable than the boy, superior children more so than average, and the

older than the younger. This variability tends to be in the positive direction at adolescence, especially for superior children. Correlation coefficients in intelligence between superior and average boys and girls through pre-adolescence, for successive examinations, are very high and positive ( $.72 \pm .05$  to  $.93 \pm .02$ ), showing relative individual stability

TABLE III. MEAN INTELLIGENCE QUOTIENTS OF SUPERIOR AND AVERAGE BOYS AND GIRLS FOR SUCCESSIVE CHRONOLOGICAL AGES

CHRONOLOGICAL AGE	BOYS		GIRLS	
	Intelligence Quotient 110+ Superior	Intelligence Quotient 90-110 Average	Intelligence Quotient 110+ Superior	Intelligence Quotient 90-110 Average
5	117.6	101.2	119.9	104.1
6	123.3	105.0	118.0	102.6
7	121.6	104.0	121.7	105.9
8	123.6	104.6	121.1	105.1
9	121.7	101.1	120.5	104.6
10	119.9	98.1	120.3	102.1
11	121.5	98.8	119.8	99.9
12	125.7	99.4	127.9	98.2
13	121.5	100.8	125.7	106.7
14	124.3	100.0	119.7	108.9

within the group. Finally (from Baldwin), the range of probable inaccuracy of predicting the adolescent I.Q. from earlier examinations is small (4.2 to 7.0 for the prediction range of the second, third, fourth, and fifth examination from the first).

**Mental, physical, and physiological growth.** Murdoch and Sullivan have held that the degree of correlation between mental and physical measures decreases with increase

in mentality, that this correlation is greatest during the pre-adolescent period and thereafter decreases, and that any attempt to estimate the mentality of average or superior children well along in years by means of physical traits would be futile.<sup>1</sup> This would seem to suggest that anatomical as well as chronological age are to be discredited in so far as they suggest anything significant regarding mental growth. However, their results are determined from only a few physical factors (weight, stature, and head diameter), and earlier it has been shown that some measures of anatomical development — for example, carpal ossification — proceed quite independently of the ones Murdoch and Sullivan employed.

A recent study<sup>2</sup> sought to classify children on the basis of general physical development and to compare the resulting physiologically accelerated and retarded groups with the mean mental age. (See Table IV.) The mean mental age of physiologically accelerated boys and girls is consistently higher year by year than that of physiologically retarded children, this becoming increasingly significant for boys at puberty. The correlation between mental age and the anatomical index employed by Baldwin (exposed area of the carpal bones of the right wrist) was  $.873 \pm .021$  and  $.869 \pm .023$  for boys and girls respectively.

If one accepts grade placement (educational age) as a rough measure or equivalent of mental development, it seems quite clear that pupils accelerated anatomically and

<sup>1</sup> Murdoch, K., and Sullivan, L. R., "A Contribution to the Study of Mental and Physical Measurements in Normal Children"; in *American Physical Education Review*, May and June, 1923.

<sup>2</sup> Baldwin, B. T. *Mental Growth Curve of Normal and Superior Children*, vol. II, no. 1, p. 11. (University of Iowa Studies in Child Welfare, 1922.)

physiologically are farther along in mental development. In other words, anatomical-physiological development correlates with mental age; and, to refer again to Crampton's study of the scholarship of high school boys, it is clear why, of the 14-14½-year-old boys in the first term, 42.9 per cent are pre-pubescent; 68.2 per cent of the 13-13½-year-old boys in the same term are pre-pubescent as against 30 per cent of

TABLE IV. MEAN MENTAL AGE IN MONTHS OF PHYSIOLOGICALLY ACCELERATED AND RETARDED BOYS AND GIRLS

CHRONOLOGICAL AGE	BOYS		GIRLS	
	Accelerated	Retarded	Accelerated	Retarded
5	72.0	62.8	74.4	57.6
6	89.4	83.2	81.3	79.0
7	101.3	97.1	99.9	95.0
8	118.2	110.8	114.6	107.0
9	131.1	120.3	128.6	119.1
10	142.4	131.0	141.1	131.0
11	155.3	137.6	151.2	144.3
12	171.1	150.1	176.7	168.2
13	179.0	158.4	(182.5)	189.2
14	194.2	166.2	194.9	183.2

the same group who have reached the third term; 50 per cent more of the pre-pubescent 13-year-olds failed than post-pubescent 13-year-olds, with a corresponding difference for 14 years of 41 per cent, and for 15 years, 24 per cent.

In summary, mental growth correlates strikingly with physical and physiological growth; superiority in intelligence is due in part to greater native capacity and a greater anatomical and correspondingly physiological development; feminine mental superiority around the twelfth chronological

year relates to the fact that girls are simply farther along in the stage of growth; that the slower-growing male perforce will be mentally outclassed during the early adolescent years until his growth tends to catch up with that of the opposite sex. Physiological maturity goes a long way toward revealing parallel mental growth in early adolescence.

## *2. Stages of growth*

**The several stages.** A few quotations from those who have written on the subject will make clear the different stages of growth. We will quote from three:

The course of human life may be figured roughly as a trajectory of which the rising portion corresponds roughly to the period of growth, the relatively level portion to middle age, and the fall to senile decay (Slaughter).

Thus, if an ordinary life lasts seventy-two years, we may divide that life into six equal parts, calling the first childhood, the second adolescence, the third and fourth maturity, and the fifth and sixth senescence. . . . The period of youth may also be subdivided, and usually is, into two, or, by some writers, into three parts. In the latter case the divisions are known as early, middle, and later adolescence. . . . It does seem clear that the first four or five years of the teens show characteristics sufficiently well marked to distinguish these years somewhat from those that follow, and so to justify a twofold division — with the dividing line somewhere about the sixteenth or seventeenth year (Tracy).

As far as the educative process is concerned, however, the child is an entirely different being at different levels of his growth. Each period of development is marked by peculiar physical, mental, and moral characteristics that demand specific treatment. . . . Neither mental nor physical development follows the law of uniformly accelerated motion. On the contrary, both are rhythmical, periods of growth being followed by longer or shorter periods of comparative quiescence, and these in turn by shorter or longer periods of growth. So different are the characteristics of both mind and body

at successive crests of these developmental waves that some writers have termed the great changes in the child's life "metamorphoses," indicating an analogy with the changes exhibited in the development of many lower forms of life and most spectacularly, perhaps, in the development of the typical insect through larval and pupal stages to complete maturity. In so far as the work of the school is concerned, this analogy is hardly overdrawn. The school life of the child presents three distinct phases: (1) the transition stage, from the age of six to the age of eight; (2) the formative stage, from eight to twelve; and (3) the adolescent stage, from twelve to eighteen (Bagley).<sup>1</sup>

Further quotations from Hall, Siegert, King, *et al.*, supplemented by such elaborate descriptions of the detailed characteristics of each of the several stages of growth, such as Bagley describes, necessarily lead the student to develop a view of human growth as quite disjointed and dissectable. The data, presented in this and the preceding chapter regarding anatomical, physiological, and mental growth, can but impress one with the continuity aspect of development, and that, in dividing growth into stages, the justification is likely to be more methodological than fundamental and essential. Specifically, even in the face of citations made regarding anatomical, physiological, and psychological spurtings at the dawn of puberty, let it be emphasized, and later it will be reiterated, that the powers and capacities were present all the time, slowly gathering strength for final expression and maturity; that differences between adolescence and childhood are more in degree than in kind, and that they are underlaid by common fundamentals; that the

<sup>1</sup> Bagley, W. C., *The Educative Process*. See pp. 185-202, for a thorough discussion of the physical, mental, and moral characteristics of the three distinct phases of school life. (The Macmillan Company, 1915.) Reprinted by permission.

reader will finally know little of adolescence except as he knows much of pre-adolescence on the one hand and the world of adult life on the other, for which adolescence proves, not a separate step, but a stage in the continuous life of growth.

### *3. Growth and pedagogical application to the junior high school*

Pedagogical applications to an extensive degree can be made regarding the growth phenomena of adolescence, and along the line of each of its aspects — anatomical, physiological, mental, educational, social-religious, and moral. Certain applications are suggested for the last four in subsequent chapters. Several fundamental applications for the first two (anatomical and physiological age) may well be stated here.

**Physical training.** Instead of physical training being conducted uniformly, with groups organized primarily upon the same chronological age or equal educational attainment, attention should no doubt be paid to physiological age. Girls, with their earlier physiological maturing, certainly need types of exercises and games not appropriate for boys of the same age. Remembering, too, the variability of physiological maturity within either sex, it is fair to expect that any child approaching or within the adolescent period will be found taking physical training with a group of the same physiological age, all the members of which presumably being interested in the same sort of games, exercises, and other physical projects.

**School advancement.** All recent investigations seem to

point to the fact that the larger and more physiologically mature child is doing better educationally, hence physiological development should be considered regularly in grade placement, and especially in cases of question — for example, failure or double promotion. Cases are often found wherein an adolescent may show poor ability in some certain line of school achievement, but be so advanced physiologically, and generally in some certain lines of school attainment, that it would prove highly unwise to retain him to work with a group quite younger physiologically. This suggests one factor of the problem of junior high school guidance.

**Industrial and part-time work.** The laws governing child labor are of course impartial, hence based upon chronological age. Perhaps it is not too much to expect new legislation, as well as the same sort of emphasis in handling the manual and industrial activities of the school itself, wherein recognition may be given to the fact that some children of adolescent age chronologically and at age educationally may be several years over-age or under-age in physiological development.

**Mental development.** It has been shown that physiological and mental age correlate strikingly, hence the physiologically more mature child undoubtedly should have recognition paid to the fact that he has different interests, attitudes, emotions, problems, etc., than his comrades of equal chronological age. It often proves the case, moreover, that the physiologically mature youth may rate no higher on a general intelligence test than a precocious boy of younger age, yet the two may differ markedly along the lines mentioned in the preceding sentence. Here is suggested one of the prob-

lems raised when a very precocious boy is allowed to skip several grades, so that finally he may be with a mentally homogeneous group, but finds himself quite ill-adjusted to the anatomical and physiological maturity of the advanced group.

The junior high school, organized primarily with reference to the varying needs of the early adolescent, can be expected to give attention to all facts of adolescent growth — physical, mental, social, moral. It can also be expected to furnish each pupil an equal opportunity to employ the energies, both physical and mental, he possesses in worth-while endeavor. This the adolescent school seeks to do, thereby guaranteeing to each pupil a square deal educationally.

#### QUESTIONS AND PROBLEMS

1. Debate the following: Mental, educational, and physiological age correlate positively and highly with chronological age.
2. Why is prediction for adolescent growth significant?
3. Cite instances in your own life, and the lives of others, for the "metamorphoses" discussed in this chapter.
4. Do child labor laws reflect the scientific facts of child growth?
5. Contrast and evaluate the individual methods of studying child growth (Baldwin) with the group methods (Crampton).
6. For what unusual cases of adolescent pupils are Roentgenograms likely to prove most serviceable?

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## PART II

### THE ADOLESCENT IN REACTION

#### CHAPTER IV

##### THE STIMULUS-RESPONSE HYPOTHESIS

THE adolescent, together with all other humans and lower animals, is a stimulus-response mechanism. This statement is basic to the study of adolescent psychology, as it is to all studies of behavior — human, animal, and even plant.

**The person versus the thing.** It is perhaps trite to point out that psychology seeks to deal with *persons*, not *things*. In writing these lines, a pencil — that is, a mere thing — is employed. It has no active part in the process of writing, is presumably totally devoid of any knowledge of what is being thought by the writer, and has no emotion or attitude aroused by the push-and-pull situation in which it is playing so blind and passive a rôle. But the writer is actively engaged in responding to many stimuli, many causes at work to produce his reaction. Some of these are the deeply rooted factors of inheritance; some the direct results of his own learned experience; finally, the many physical factors of light, sound, temperature, pressure, etc., all strictly objective to his physical self.

The simple illustration just made suffices to show that the most fundamental attribute of a person is to respond, to react, to behave, with reference to either simple or complex stimuli, and that this attribute is the basic manifestation of

organic life. From the simplest to the very highest and most complex living forms this fact of adjustment to the stimuli of environment, both individual and social, as well as physical and psychical, characterizes the entire life career of the particular biological organism being studied.

**The possibilities of adolescent reaction.** The adolescent possesses a vast wealth of reacting or responding machinery, by means of which he can adjust to the stimuli or situations presenting themselves. In the first place, he has retained throughout the years of childhood and boyhood the inborn mechanisms of response. Also, twelve years or so have been at work not only to get him to attend to situations which he might not by native inclination have been led to respond to, but also literally to provide him with acquired mechanisms of adjustment.

**The nature of the stimulus.** The stimulus or situation rarely proves simple and unitary. Of course it is possible to bring such simple factors to bear upon a person as a single tone, light rays of equal length, or even a single word to spell or a fundamental number combination to add. On the other hand, the actual life situations are exceedingly complex and represent a collection of many stimuli, as the reader can easily verify by pausing and analyzing the factors making up the total reading situation in which he is now placed.

**The nature of the response.** The responses may vary from those of occasional simplicity to very great complexity. Among the possibilities of reaction occur at least the four following main types:

1. Explicit learned (habit) responses, such as reading the printed page, factoring an algebraic expression, combing the hair in the

latest mode, and observing one's table manners or classroom etiquette.

2. Implicit habit responses, wherein is meant all the subjective experience or mental activity involved in responding to the situation, such as speech reactions to a question, thinking with reference to a problem presented in class, or any of the mental processes of sensation, memory, imagination, emotion, etc., these apparently revealing that mental activity is just as properly the response to definite stimuli as all other forms of which the organism is capable.

3. Explicit hereditary responses, these to include such instinctive reactions as seen in adolescent fear, anger, sex attraction, athletic rivalry.

4. Implicit hereditary responses, by which reference is made primarily to the autonomic activities of certain body muscles and glands considered so fundamental in explaining the occurrences of adolescent emotions.<sup>1</sup>

From the above it is easy to see that the teacher of the adolescent pupil asks the psychologist several pertinent questions:

(1) What are the typical reactions — unlearned or learned — of which the adolescent is capable?

(2) What stimuli or situations are adequate to incite these?

(3) How may reactions which have been proved desirable be strengthened, and the undesirable ones modified or eliminated?

(4) What special organizations may the junior high school

<sup>1</sup> It is seen, of course, that the writer strives mainly to view the responses as open to objective observation. He frankly fails with reference to "2" above, and departs herein from Watson, John B., *Psychology from the Standpoint of a Behaviorist*, p. 14. (Quoted by courtesy of Messrs. J. B. Lippincott Company, Philadelphia, 1919.) In doing this he is, of course, persuaded that behavior subjectively viewed is properly a part of the subject-matter of psychology, and that the strictly mental aspects of reactions rate side by side with the muscular and glandular in any complete description of the response side of the stimulus-response operation.

definitely seek to provide in order that situations may be afforded to incite reactions of genuine educational worth?

### QUESTIONS AND PROBLEMS

1. Distinguish between *stimulus* and *situation*, and analyze typical instances of each.
2. In what respects does a person (for example, an adolescent youth) differ from a thing (for example, a tree, a watch)?
3. Furnish illustrations from a single situation of the four types of reactions listed in the foregoing chapter, such as a question asked you by your class instructor.
4. Are reactions always conscious?
5. Attempt to discover an example of a stimulus causing a reaction not issuing into actual muscular response.
6. Are all actions caused by a stimulus, either internal or external?

## CHAPTER V

### THE INSTINCTIVE OR UNLEARNED ELEMENT IN RESPONSE

THE unlearned or hereditary forms of response are probably no more or less for the adolescent than for the boyhood which preceded or manhood to follow. These unlearned modes, too, play little more or little less prominent rôles in adolescence than at other periods of life, with the possible exception of the first few days of babyhood. No act of behavior is ever to be understood except as a resultant of two forces — the pull of the hereditary form of response, and the learned acquirements of individual experience. Neither of these forces is ever absent in adolescent behavior.

**Types of unlearned tendencies to behavior.** Psychology joins with biology in attempting to catalogue the unlearned ways, possessed by the human organism, of responding to the demands set upon him. In this connection are always mentioned the automatic acts of breathing, digestion, excretion, etc.; the reflexes of both the physiological and sensational type; and finally, the instinctive. The reflexes and instincts always monopolize discussion, and it is customary to point out that both are responses to adequate stimuli of the environment; that they operate in service to the organism, and that they represent the operation of definite, predetermined pathways of the nervous system. To this trilogy (automatic, reflex, instinct) it is becoming fashionable to add the capacities, to which reference will be made later in the text (Chapter VII).

**The neural aspect of unlearned behavior.** No more fascinating discussion presents itself to the student of psychology than that of the physiological-anatomical aspects of all activity, learned no less than unlearned. It is assumed, however, that the reader is already familiar with the general facts describing nervous structures and their organization and operation, the neurone doctrine, and the integrative workings of the nervous system. Three quasi-neural facts, however, are so basic to the present discussion that they properly may be mentioned.

(a) The reflex arc is the unit of activity. The reflex represents in neural terms a simple arrangement of neurones, starting in a sense organ and ending in the muscular-response machinery. Hereby are provided the immediate, mechanical, and simple reactions to stimuli. Side by side with these simple arrangements occur the countless thousands of unorganized neural structures, these providing the almost unlimited amount of random, spontaneous activity, seen at its maximum with the babe but always present or securable in the adult.

(b) Complex groupings of simpler reflexes into proper operating order produce the complex hereditary modes of responding commonly called the emotional and instinctive. This grouping of many neuronie structures so that, in the presence of a certain stimulus, a very complex and widely diffused bodily (and at times mental) reaction results, is to be understood in terms of unlearned inherited pathways through the nervous system, including both the cerebro-spinal and the autonomic.

(c) The habits or acquired modes of response represent the attainment or connecting of neural pathways through the learner's own experience. The unorganized spontaneous reflexes previously mentioned represent the neural stuff out of which habits are to be formed, and the history of organizing these, into such perfect serial order as finally to rival the unlearned connections, becomes the fascinating psychology and neurology of learning discussed later in this chapter.

The definite way in which the unlearned modes of human behavior are assigned a neural basis, together with the fact that no neural structures are acquired by growth after birth, but are rather merely modifications in the connections of these, should place the reader quite on his guard when he is sometimes asked to think of certain instincts as being saltatory (to *leap* or *rush forth*), and as springing forth almost overnight and endowing the adolescent with a previously undreamed-of, yet unlearned, way of response. Perhaps it is wise to anticipate the outcome of this chapter and to state that the psychology of adolescence is not to be understood mainly, or perhaps even primarily, in terms of certain newly discovered instinctive urges, but rather in the accumulated modifications of the now fairly antique instinctive-emotional trends, as connoted by the term *habit*.

Dismissing the fairly easy task of classifying the many simple reflexes of which the adolescent is capable (for example, winking, sneezing, coughing, etc.), and postponing the far more difficult discussion of the emotions,<sup>1</sup> the reader comes at once to a presentation of the complex forms of unlearned behavior commonly called "instinctive."

**The problem of classification.** It becomes very difficult to present any accurate classification of instinctive responses, even though many psychologists produce lists having so many logical values that the reader innocently comes to conclude that they likewise possess psychological accuracy.

<sup>1</sup> It seems of practical value to discuss emotion in parallel with the intellectual and action aspects of the conscious life, rather than to continue here with a discussion of its unlearned and strictly bodily setting. The treatment given instinct is sufficient to illustrate the general treatment later to be afforded emotion.

The causes of this difficulty in classification are not far to seek. First, it has already been pointed out that the unlearned responses suffer modification almost from the date of their first appearance. The learning or habit factor operates to modify not only the response itself, but also alters the situation for which the response was originally and natively prepared. It becomes impossible, therefore, to take any single act of adolescent behavior — for example, the ardent lover wrestling with the problem of escorting his first love to a class party, or the entire high school student body staging a red-paint raid upon the school plant of the rival city high school on the eve of the annual football game — and so to dissect it into its two basic components as finally to warrant a statement that “these elements in the activity are instinctive (unlearned), while those are habitual (learned).”

By way of corollary to the above, the nature of the stimuli and situations evoking all responses made after infancy are so varied and complex, likewise the responses themselves, that ultra-simplicity of analysis is no less psychologically possible than it is logically necessary or advisable for practical purposes.

Another factor of difficulty is that instincts seem often to crosscut each other and take the same avenues of expression. For example, the so-called play instinct may employ the same musculature, and have the same general objective appearance in a gymnasium fête as when employed in settling a real quarrel with a single opponent. In either case it has been claimed that the exact mode of expression may be dictated by the so-called imitative instinct, whereby the individual has “come to learn” certain best ways of meeting his antagonist.

No biologist or neurologist has succeeded, or is likely to succeed, in so charting the complex preferred pathways through the nervous system upon which instinctive responses presumably depend that he can, with any accuracy, assign the exact neural basis for the behavior-phenomena psychologists love to describe; for example, fear, anger, collection, curiosity, imitation, sociability, rivalry, love, etc. Even were these reducible to topographical charting at or soon after birth, the neural modifications set up through subsequent experience would no doubt completely alter the original neural patterns.

The above-mentioned difficulties should not deter one from attempting to classify the facts of instinct. What they should do is to place the reader on his guard, in two ways. First, to distinguish between the practical values of a classification and its ultimate and final scientific form. Second, to avoid being led to think of his fellows as possessing a fixed acting group of potential responses, and that all he, as parent, the teacher, or associate, has to do to control behavior is to know the exact time to apply the magic stimulus of the password, as a result of which a definite instinctive mechanism is to hurry and respond along predictable lines

**Types of classification.** Practically all textbooks on psychology give a descriptive classification of instincts. These vary all the way from the attempts to describe rather loosely the generally recognized instincts in man, to describe the reaction and then define the stimulus or situation to which the reaction is made, or to make a genetic method of approach and base a classification upon objectively gathered analysis of both the stimulus and the response.

Angell's classification is suggestive as a rather loosely descriptive, yet valuable, attempt at cataloguing: Fear, anger, shyness, curiosity, affection, sexual love, jealousy and envy, rivalry, sociability, sympathy, modesty (?), play, imitation, constructiveness, secretiveness, and acquisitiveness. McDougall would carry description still further and present a list of simple instinctive impulses and the parallel primary emotions. This parallel classification is already classic, and, in spite of the attacks made against it by the opponents of purposive psychology, it has probably done more to stimulate thought regarding the nature of instinctive-emotional behavior in general, and for the adolescent in particular, than any other classification yet proposed. It appears to McDougall, therefore, that we are to understand the complex activities of adolescence as the operations of the following, either in their somewhat native elemental or compounded state, or colored by habits, which "are formed only in the service of the instincts":<sup>1</sup>

SIMPLE INSTINCT	PRIMARY EMOTION
Flight	Fear
Repulsion	Disgust
Curiosity	Wonder
Pugnacity	Anger
Self-abasement (subjection)	Subjection (negative self-feeling)
Self-assertion (self-display)	Elation (positive self-feeling)
Parental	Tender

Thorndike, in most noteworthy fashion, has described the reactions and then assigned the stimulus or situation calling forth the reaction, hence giving the following list:

<sup>1</sup> McDougall, W., *Social Psychology*, p. 43. (John W. Luce and Company, Boston, 1912.)

I. Food-getting and protective responses — eating; reaching, grasping, and putting objects into the mouth; acquisition and possession; hunting; collecting and hoarding; avoidance and repulsion; rivalry and coöperation; habitation; response to confinement; migration and domesticity; fear; fighting; anger.

II. Responses to behavior of other human beings — motherly behavior; gregariousness; responses of attention to other human beings; attention getting; responses to approving and to scornful behavior; responses by approving and scornful behavior; mastering and submissive behavior; display; shyness; self-conscious behavior; sex behavior; secretiveness; rivalry; coöperation; suggestibility and opposition; envious and jealous behavior; greed; ownership; kindness; teasing, tormenting, and bullying; imitation.

III. Minor bodily movements and cerebral connections — vocalizations; visual exploration; manipulation; cleanliness; curiosity; multiform mental activities; multiform physical activities; play.

Gates <sup>1</sup> has continued the Thorndike tradition and has recently presented a very workable classification of instincts, grouped according to the types of stimuli which arouse them as follows:

- (1) Instinctive responses to bodily or organic conditions.
- (2) Instinctive responses to objects and events in the environment.
- (3) Instinctive responses to the presence or activities of other human beings.

**The rôle of instincts in man.** It has taken the genetic method of approach to put the student on guard against accepting any of the above classifications as possessing scientific finality. Watson has performed a genuine scientific service in making a start at studying certain types of instincts under the reasonably controlled conditions of the psychologi-

<sup>1</sup> Gates, A., *Psychology for Students of Education*, p. 134. (The Macmillan Company, 1923.)

cal laboratory. After confronting infants with a large range of situations alleged to elicit such responses as fear, anger, love, acquisition and possession, hunting, collecting and hoarding, etc., he comes to conclude that most of the asserted instincts, especially for post-infantile periods, are really consolidations of instinct and habit, with overwhelming emphasis upon the latter. Indeed, Watson's viewpoint gives so suggestive a slant upon the problems of adolescence later to be considered, and furnishes such a wholesome orientation in studying the typical educational problems of adolescence, that the following liberal quotation<sup>1</sup> is considered advisable as setting forth the rôle of instincts in man:

1. Man is supplied with a large number of directly adaptive life-conserving activities which care for the intake, digestion, and dissemination of food products and for the elimination of waste and for procreation. These purely vegetative functions serve him as they serve animals lower than man and are possibly just as "perfect."

2. Man at birth and at varying periods thereafter is supplied with a series of protective attack-and-defense mechanisms, which while not nearly so perfect as in animals, nevertheless form a substantial repertoire of acts which needs only slight supplementation by habit before being of direct utility to the individual in his struggle for food, against enemies, etc. These are the protective and defense attitudes — the instinctive factors predominate.

3. Then follow the occupational tendencies (manipulation) supplemented by habit — seen earliest in collecting, hoarding, building of blocks, hammering and the use of tools generally, drawing, modeling in clay, etc. In the crude stage of these activities, the instinctive factors predominate and make clear the lines along which habits must follow. The instinctive factors are, however, soon lost sight of in the activities of the skilled workman, the artist, and the collector. These differing activities are seen at

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<sup>1</sup> Watson, J. B., *Psychology From the Standpoint of a Behaviorist*, pp. 266-68. (J. B. Lippincott Company, 1919.) Quoted by permission.

a very early age in children. Modern school methods, and especially the college, tend to break them down. One rarely finds a lad of twelve who cannot tell exactly what he wants to become, what he is fitted for, and why he is fitted for it. By the time he has had all the manipulative tendencies cultivated out of him in college, he can rarely tell what he is fitted for, and he drifts now into this work, now into that, depending upon his father's business, temporary openings, the traditions of the school, or the aspirations of his parents or other backers. We cannot help but feel that there are enough instinctive leanings present in early youth to properly shape any child's future activities. The problem is to find the method of discovering them, and then to shape the schools and colleges in such a way that these tendencies will be fostered rather than lost. If they are kept central, any amount of culture may be built alongside of them without bringing about their submergence.

4. Individuality seems in some way to depend upon man's original tendencies, not upon the presence of the completed pattern type of instincts, since these do not exist in any large number, but apparently upon factors which, when taken singly, are difficult to detect, but which when taken together are most important. There is not much experimental evidence for this conclusion, but there is a great deal of common-sense data. We have in mind such differentiations as follows: Two men with the same and equal training, and approximately equal in ability in any skilled field, each capable of turning out fine work, will show individuality in workmanship, design, and methods of approaching their problems. Two equally skilled pitchers or catchers in baseball show this very well. Two men working upon lathes or modeling in clay, or making drawings of the same microscopic slide illustrate it. Apparently there are different fundamental part activities which have persisted in spite of instruction. We dignify these in the artist by the terms "touch," "technic," "individuality," etc. The fact that they have persisted seems to prove their original nature.

5. The principal rôle of all instinctive activity, neglecting the vegetative and procreative (the latter especially is not lacking in habit supplementation), is to initiate the process of learning. If an object did not call out either a positive or a negative response, the formation of a habit with respect to that object would be impossible, unless we could take measures to condition a response.

After reading the foregoing pages devoted to the attempted classification of adolescent behavior, the reader should come out with a fundamental viewpoint which permits of three divisions:

First, practically all adolescent acts are the consolidation of instinct and habit, with the latter generally predominating.

Second, it makes little practical difference into what factors acts of adolescent behavior are analyzed, as these function as wholes in each one's daily life.

Third, any one of the above classifications has its values, and admits at least roughly the materials of any other, the seeming differences being, like so many other differences in life, those resultant from differing methods of approach instead of complete incompatibility.

**The trilogy of adolescent behavior.** It becomes immediately practical to say that adolescent, and all other behavior, may be classified as individual, racial, and social. The first includes all natural and acquired ways of reacting that make for the welfare of the individual; the second for the race or species; the third for the life of the group or society.

(1) *As an individual*, the urge to look out for the safety and well-being of one's self is strong. The early factors upon which self-preservation depend (feeding, fearing, fleeing, fighting, etc.) continue to enter into behavior, but of course these have long since taken on such a coloring by reason of the individual's experiences that they scarcely resemble their original form. The teen-age youth, of course, continues to manifest the individual traits of talent, temperament, and attitude he has long since displayed, and to

continue to look out for his own interests, to express himself, to "be a cause," to gratify his curiosity, to "show-off," even to seek new avenues of self-expression and to provide means of rendering himself effective with his fellows. The individualism of adolescence is not to be understood, however, as something new in the adolescent's experience; rather, it is the enlargement of earlier individualistic tendencies in the light of their modification and unfoldment in broader situations.

(2) *As a member of the race*, the parental or sex urge is strong. Most writers on adolescence emphasize that many if not most of the mental processes of adolescence center in sex and its function. Hall and his disciples especially urge not only the saltatory character of the sex instinct, but emphasize such phenomena as an instinctive drawing apart of the two sexes just before puberty, this bringing a loss of interest in each other and being ascribable in the main to the fact that the advent of puberty is earlier in the female by a year or two. Whipple<sup>1</sup> would point out the strength of not only the primary sex characters (sex love, and impulses toward sexual activity) but also the secondary sex characters that are indirectly associated with the emergence of the sex consciousness; for example, interest in adornment, "showing off," and the many other "long-circuitings" or "irradiations" of the Hallian terminology. Coe<sup>2</sup> and a host of others would assert that the sexual capacity, in general, is to be considered as the physiological basis of all the higher and

<sup>1</sup> Whipple, G. M., in Monroe's *Principles of Secondary Education*, pp. 258-59. (The Macmillan Company, 1916.)

<sup>2</sup> "Adolescence," in Hasting's *Encyclopedia of Religion and Ethics*.

finer qualities of adolescent and subsequent personality, whether ethical or spiritual, offering as proof of his position the statement that persons who are made eunuchs in childhood are very largely insensible to social and religious motives of any kind, and that defective physiological conditions, or the misuse of physiological powers, produce morbid moral and religious states. In fact, some moralists have so magnified the difficulty that clusters around the sex motive as to consider it primarily sordid and debasing to character.

Sigmund Freud has painted the life of sex in lurid terms, and makes adolescence the primal stage of life for the sex-urge to come in conflict with the moral and social factors being inculcated through education. As a result of this conflict the sex impulses are thrust out of consciousness ("suppressed"), later to return in the dream life, reverie, fantasy, inspiration, conversion, or in the hundreds of other "sublimations" of the sex impulse. This is not the place to show the extravagances of Freudian psychology, most of which have to do with overlooking <sup>1</sup> the rôle of other instinctive urges in the zeal to emphasize the sexual, to overstress the psychological fact or possibility of repression, and to make a sensual interpretation of the normal life. On the other hand, Freud, Watson, Cannon, Moll, and others rating as biological psychologists, far more than the psychologists of a decade or so ago, have shown conclusively not only that sex experiences and operations are prominent during adolescence but that their genesis and development, especially for most aberrant forms manifested in adolescence, go far back to the days of boyhood, childhood, and infancy. The prominence

<sup>1</sup> See Part IV, on "Adolescent Personality."

of these aberrant forms perhaps invites a word of comment, for there is little room to question that "the curves of criminality in general, and of sexual criminality in particular, rise sharply during the period of youth; that a majority of prostitutes enter upon their vicious careers between the ages of fifteen and eighteen, and that abuses of the sexual functions are widespread among both boys and girls at this age."<sup>1</sup>

The following represent the safe statements to make regarding the sex life of adolescence: (a) it is very strong, and operative both directly and indirectly; (b) it is not saltatory, and, in its most aberrant forms, is antedated in pre-adolescence; (c) while playing a prominent rôle, it is far from being the only instinctive determinant for adolescent conduct; and (d) its development is generally natural and normal, and it is an exaggeration to think of the adolescent as potentially to be shipwrecked unless he is provided an environment "purified" far beyond that to be found in the typical American home, school, and community.

(3) *As a member of a social unit, or group, the adolescent finds the social urge strong.* As a matter of fact, adolescence seems to be a time for the many group or social instincts, long since operative, to approach their maximum strength to dictate behavior. Gregariousness, sympathy, approbation, and altruism are found playing greater rôles as the adolescent's body becomes more prepared for the general racial functions of sex, and as he finds himself naturally placed in a more mature and complex society than to which as a boy he

<sup>1</sup> Tracy, F., *The Psychology of Adolescence*, p. 147, after Caldo, after Hall, in *Adolescence*, vol. I, chap. VI. (The Macmillan Company, 1920.) Quoted with permission.

has become accustomed. In fact, there gradually matures the hetero-centric attitude which, at times in very sharp conflict with the ego-centric, brings the consciousness of self into direct reference and relation to others.

No less than for the sex urge, the social impulses are of profound significance for adolescent behavior. From their successful employment within, and proper adjustment to the social schema wherein the youth moves, result the "last and perhaps most significant advances in mental development." To develop a proper attitude of sympathy for one's fellows, and a willingness to forego individual good for the larger good of one's group; to participate with, rather than to work against, the group activities; to find that individual efficiency supplements social efficiency; finally, so to adapt to "the whole group of non-material resources of the race, intellectual, moral, artistic, and religious," that one becomes both a contributor and sharer in the active life of groups naturally his own — these suggest the range and significance of the social life natural for the adolescent. Their realization connotes social efficiency; failure in realization results in inefficiency, social incompatibility, and unhappiness.

**Adolescent behavior and the junior high school.** Around this trilogy of adolescent behavior — individualism, sexualism, socialism — accrue the mass of educational problems and practices of the educational institution for the adolescent, namely — the junior high school. The psychology of junior high school instruction depends quite largely upon the individualism of the pupils, and supervised study, instructional differences corresponding to ability groupings, failure prevention, vocational counseling and training, etc.,

are statable primarily in terms of individual capacities and interests. Again, the sexualism of adolescent life naturally ties up with the psychology of guidance — moral, appreciational, and the establishment of proper individual and group contacts between the sexes. Finally, the psychology of socialization is involved in the organization of the school community, citizenship training and student government, avocational and social activities, and integrating forces in school community life.

The applied phases of this trilogy of adolescent behavior in both its instinctive and habitual aspects, as exemplified in concrete junior high school practice, are taken up in Section II, where separate chapter discussions present the suggestive topics mentioned in the preceding paragraph.

**The educational employment or control of instincts.** From the above discussion of the instinctive or unlearned tendencies to respond, it becomes clear that the junior high school must have straightforward principles of controlling the life of instinct. These are three — cultivation, direction, elimination.

*By the cultivation* or direct utilization of instincts is meant furnishing a suitable stimulus or situation to call them into action. The degree to which an environment of shops, laboratories, art rooms, gymnasium and athletic fields, visual instruction, socialized recitation, project method, club activities, student government, etc., furnish normal and adequate situations leading to instinctive reactions is, of course, very great.

*By the direction* of instinct is meant either connecting it with a situation for which it was not originally prepared, or

having it expend itself in some motor response differing from the original pattern reaction. The entire psychology of the conditioned reflex <sup>1</sup> suggests the first aspect of the principle, and sublimation the second. For illustration, the original love or sex instincts may be, and no doubt through junior high school instruction are, joined to such situations as great masterpieces of art, music, literature, or even the great characters of religious writings or fiction. Naturally the expressive side of the instinct takes a form appropriate to the situation, so only the central side remains fairly true to the original character of the sex impulse. Perhaps a good illustration of direction affecting primarily the expressive side is found in the combative activities of rival groups, where the pugnacious factors on both the receptive and central sides may be quite of the primitive and original type, but the expression taking the socially approved form of intellectual rivalry of two groups competing for high marks, winning a basketball tournament, securing more subscriptions to some school activity, or class or school rivalry.

*By elimination* is meant rendering an instinctive tendency ineffective to control conduct. It is, of course, not to be argued that the original pattern upon which a certain unfavorable instinct depends is torn up as one would tear up a traction line decreed for abandonment. Rather, it is suggested that, by withholding the stimulus normal to call forth an instinct no longer of direct social value, or perhaps by making the result of its action so unhappy for the individual concerned, either the tendency will wane by disuse or become held in check, respectively, in either case not entering into

<sup>1</sup> See Chapter VIII, on the "Emotions."

behavior. For illustration of the former, perhaps unrestrained cruelty is practically eliminated from normal human behavior primarily because situations are rarely built to give it vent; of the latter, a too careless collective urge for a classmate's property or a too marked tendency to play the leader may very often be quasi-eliminated through the application of persistent squelchings administered both by the teacher and the social group itself.

The reader should not be over-impressed by the apparent simplicity of the above-mentioned principles. In fact, instinctive activity is always tied up in a very complex fashion with conditions that satisfy or annoy the organism. It has been pointed out that three conditions may operate: (1) when an instinct is ready to act, for it to act is satisfying; (2) when an instinct is ready to act, for it not to act is annoying; and (3) when an instinct is unready to act, for it to act is annoying. The readiness or unreadiness of the instinctive act cannot always, or even often, be stated with accuracy by the teacher of the adolescent.

**How acquired reactions modify instinctive tendencies.** Again, the problem of educational control becomes tremendously complicated by the fact that, through each single act, however instinctive in character, acquired reactions, both physical and mental, are secured which operate to give the native tendency an indirect, disguised, or sublimated expression. The fact is that many instinctive tendencies are not carried through to their natural limits, but that all sorts of thwarts appear to disturb the feeling-equilibrium of the organism and set up a conflict demanding further activity. Among the causes of instinctive thwartings may be men-

tioned a conflict among rivaling instincts, as when the basketball player is tempted to star rather than to engage in team work; the many acquirements from social experiences, in the form of habits, ideals, customs, and attitudes, as, for example, the "honesty-is-the-best-policy" practice during a written examination, when all one's instinctive tendencies of self-defense, egotism, rivalry, etc., are potential urges to appropriate the mental goods of a classmate; finally, the conditions of inability, due at times to the subjective impossibility of *capacity to do* to keep apace with one's *interest to do*, or the sheer difficulties of the envioning situations in which the youth may perhaps be a misfit.

Angell long ago pointed out that consciousness occupies a peculiar intermediate position between instinctive and acquired ways of behaving, and that it makes its appearance primarily as a *problem-solving* entity when instinctive activity is thwarted and is not adequate for meeting the situation confronting one. This is to say exactly that habits (learned ways of reacting) begin to develop when old ways of behaving break down, and that habits are acquired not only when instincts fail but also in the service of instincts. In a certain very real sense the continued repetition of an act through the stages required for learning is quite largely determined by the state of readiness or unreadiness of the instinctive tendency giving it excuse for existence; also, the thwartings mentioned in the preceding paragraph are learned adjustments acquired in service to instinctive demands.

The general character of adolescent learning, and the catalogue of learned ways of reacting securable by the adolescent, comprise the material of the next chapter.

## QUESTIONS AND PROBLEMS

1. Attempt to reclassify the list of instinctive tendencies supplied by Thorndike, under individualistic, sexual, and social.
2. Is the adolescent to be held responsible for immoral acts prompted by native impulses?
3. Take a group of six adolescents you know, and calculate for each the most prominent instinctive drive you detect in their behavior.
4. Furnish concrete illustrations for each principle of control stated for instincts.
5. Should a junior high school be organized and operated with direct reference to furnishing stimuli for innate tendencies to operate?
6. Describe, in objective terms, the adolescent while instinctively urged:  
(1) to secure social approval in the classroom and on the playground;  
(2) to play; (3) to imitate; (4) to collect; (5) to express rivalry.

## CHAPTER VI

### THE HABITUAL OR LEARNED ELEMENT IN RESPONSE

LEARNING is a psychological fact of no more monopoly with the child than with the adolescent or adult. As pointed out in the discussion of the unlearned ways of reacting, the fact of activity is the fundamental one characterizing organisms, including persons; that man in all stages of his life reacts upon the situations confronting him, either by the unlearned (inherited or instinctive) mode, the learned (acquired or habitual), or these in combination.

**Material for learning.** In discussing the neural aspect of unlearned behavior, the reader was urged to think of this as correlated with complex innate groupings of simple reflexes into proper operating order. In the same way, emphasis was placed upon the attainment or connecting of new neural pathways as the problem of individual experience or habit formation. When one stops to visualize the millions of simple neurones, especially cortical, making up the cerebro-spinal nervous system (this being the one upon which learning is presumably most directly registered), he is almost overawed by nature's highly appropriate provisions for the recording of the experiences which the individual, at times both passively and actively, undergoes, as well as by the lavishness displayed in providing a few million neurones likely never to be called upon in the learning activities of the normal life.

The key to learning, especially from the neural point of view, is seen to rest quite fundamentally upon the random, spontaneous character of neural action. Frequent illustrations are always at hand of the fact that excess neural strength is very often, even if not constantly, available, and that, in the very nature of its necessary outflow into hundreds of thousands of neural structures, the basis is laid for new connections and new preferred pathways of neural response upon the subsequent presentations of the appropriate stimulus.

**The meaning of learning.** This factor of random, spontaneous activity is probably found at its maximum with the well-nourished infant. In the incessant workings of its musculature — fingers, arm, limbs, facial muscles — and in its cooing, babbling, etc., two significant facts appear. The physical organism is producing energy beyond that required for carrying on the normal automatic and instinctive processes, and this excess energy must get dissipated through the safety valve nature has provided, namely, the millions of unorganized neural channels, hence resulting in a vast amount of apparently useless expenditure of energy. Yet this is really the infant's motor "stock in trade," out of which he will finally form certain proper serial connections, these then to be his learned ways of reacting.

Consequently, the problem of learning becomes that of effecting proper connections among a vast amount of unorganized spontaneous reflexes. By illustration, learning to talk, to control finger and arm movements in writing, to skate, to perform gymnastic feats, to conjugate a Latin verb, manipulate apparatus in a scientific laboratory, memorize a poem,

preside over a socialized recitation, etc., would seem to be primarily the reorganization into proper serial form of simpler reflex ways of reacting, long since existing, and awaiting only learning (organization) to be transferred from the random and relatively useless into the organized, controlled, and useful.

Learning is to be viewed, therefore, primarily as the modification of behavior when the learner is forced to face situations for which there is no instinctive or previously learned response ready to operate.

It needs to be kept constantly in mind that it is merely the pattern or combination that is acquired, and that each and every element in the final complex has no doubt long since appeared in the unorganized expressions of the spontaneous type. With learning so viewed and so generalized, it is possible and advisable to present the logical stages of all learning — animal or human, motor or ideational, infantile or adolescent.

**Stages in learning.** When the individual is presented with a situation, physical or mental, and finds no immediate way of meeting it, the psychological stage is set for learning. The following analysis is logical and, in general, psychologically and chronologically accurate.

(1) *Random, excess activity.* This stage shows the typical breakdown in the control of a situation, and is characterized by random spontaneous movements and ideas not necessarily or immediately related to the solution of the situation confronting the learner.

(2) *Directed activity.* This suggests the fixation of attention upon that portion of the random activity in which success will probably lie. For the case of the adolescent the problem of directing activity into the zone of probable success is, of course, relatively simple, since his attention may be quite easily controlled and directed.

(3) *Adaptive activity.* This stage brings the successful form of reaction, the one that proves adaptive to the needs of the situation. Interesting to note, whether the learning is on the motor or ideational level, the learner seems to stumble upon the adaptive activity, and may properly be said to have learned by "trial and error." Certainly he is often surprised when, out of a vast amount of random activity, he discovers the particular form meeting the needs of the situation.

(4) *Repetitive activity.* Herein is opportunity provided for fixing the adaptive responses in proper serial order, and for eliminating not only the unsuccessful ones but also those interfering with the speed and accuracy of the proper adjustment.

(5) *Coördinated activity.* This final stage suggests the finished product of learning wherein, upon the proper situation presenting itself, the learned response is made with a perfectibility rivaling any unlearned way of reacting.

**Complex learning situations.** Typical complex learning situations faced by the adolescent reveal the accuracy of the foregoing analysis. For instance, consider the case of learning the following gymnasium exercise:

The instructor faces the parallel bars, grasps them in a certain manner, vaults astride, does a shoulder roll, points his toes, resumes the straddling position and dismounts to the right. The observant youth in turn attempts to grasp the bars and give the same graceful leap as his instructor. Generally to the sorrow of bruised shins he finds that even the preliminary vaulting has its success conditioned by a nicety of coöperation of leg, arm, and eye muscles, and that this does not come automatically but only after repeated attempts. Furthermore, that once astride the bars his troubles have just begun, for legs, arms, hands, head, and other portions of his anatomy seem hopelessly at cross purposes as he attempts to perform the shoulder roll without losing his grip upon the bars, and crashing through to the floor. After considerable boosting, and sustaining by the instructor, he fairly rolls off the apparatus, and the first trial is completed. After having the errors of his execution pointed out, and perhaps seeing the instructor or his class-

mates perform the exercise many times, the novice tries again and again, and finally learns to execute the new coördination with ease and accuracy.

In the above illustration the random excess activity may continue for many trials, quite in spite of the pattern set and special instruction given regarding the way to direct attention in meeting the situation. Again, when the boy finally navigates his first unassisted roll, he is likely to be quite at a loss as to just how he placed arms, elbows, limbs, etc., so that he finally secured a fairly satisfactory result. Finally, only after many acts of repetition does he smooth out the rough places, eliminate permanently the unnecessary movements, and finally secure the "good form" expected in any such coördinated activity.

A second illustration may be drawn from the case of a girl student learning to solve an original problem in geometry:

By the very nature of the reading process, the initial amount of random activity is cut down and the learner attempts to size up the immediate bearings of the problem and speculate regarding its solution. In this search for the adaptive activity, much random and waste activity may generally be observed, as when the student attempts to draw the basic figure and study it for suggestions, to try circumscribing a circle about the triangle or to erect perpendicular bisectors to the sides, to turn back to the probably related propositions and try to discover a cue there, or perhaps ask Mary to let her see her drawing, etc. When the proper cue finally presents itself, the student generally is no less taken by surprise than in the case of the gymnast who learned largely by trial and error. Of course, the geometry student spares herself the long stages of repetitive activity, although she often wishes for these during the subsequent recitation or long-deferred written examination period, when she realizes that the one single adaptive success so happily stumbled upon has become lost through not being "hammered in" by repetition.

**Certain laws of learning.** The above illustrations of typical adolescent learnings, the one motor and the other largely ideational, suggest the following:

(1) All complex acts of learning approximate the fivefold analysis set forth, and are to be understood primarily as of the "trial and error" type.

(2) No amount of good pattern-setting completely frees the learner from making to some degree his own discovery and fixing the proper responses.

(3) Random spontaneous activity, either in movements or ideas, is present in all such learning, and the discovery of the adaptive response comes only after a process of "try, try again," either on the motor or ideational level.

(4) The so-called laws of learning — better, of habit fixation — are primarily statable in terms of the recency, frequency, and intensity of certain of the numerous reactions provoked by the learning situation. They are not to be understood primarily in terms of satisfyingness *stamping in* the successful responses, and dissatisfyingness *stamping out* the non-adaptive ones; rather, the mechanically operating and mathematically statable laws of the recency, frequency, and strength of the successful response go a long way toward describing what is actually taking place when the adolescent is learning a new way of meeting a situation not readily and directly handled by instinctive or earlier learned methods.

(5) Simple acts of learning occur constantly, and these seem to be both merely incidental to the major activities of the learning and statable in the far simpler terms of an associative *bond* or connection, as, for example, the student seeing the side-by-sideness of the *amicus-friend* bond. On

analysis, however, it will be seen that even such simple acts of learning involve to a degree probably all the stages outlined for more complex ones, and that the actual learning involved in setting up merely a simple bond is far more complex than it is sometimes portrayed.<sup>1</sup>

**Instinct in relation to habit.** In keeping with all that has gone before in reference both to the control of instinct and the character of learning, the reader naturally comes to see that, when the unlearned way of meeting a situation fails, modification in behavior normally takes place — mental or physical — and that all such learned adjustments are acquired in the service of instinctive trends. It is easy to see, for example, that such skills as writing, reading, and calculating have developed primarily because the pupil has found himself in situations worthy of control but wherein he himself was lacking. Charters makes full use of this fundamental psychology in emphasizing the function of all such truly racial subject-matter, and its relation to individual instinct, interest, problem, and need.<sup>2</sup>

**Learned ways of behavior.** It is interesting to point out a further fact, not too often realized — that all individuals, adults no less than children, often adjust with great difficulty to the thwarting of their more basic wants, and either suffer a mental break under the strain, or secure most subtle ways of indirectly exercising or adjusting to a thwarted tendency. These constitute learnings often of profound significance in

<sup>1</sup> Judd, C. H., and Buswell, G. T., *Silent Reading*. Supplementary Educational Monographs, no. 23. (University of Chicago Press, 1922.)

<sup>2</sup> Charters, W. W., *Methods of Teaching*. (Row, Peterson and Company, 1909.)

individual behavior, even though they may seem generally to expend themselves primarily upon the mental level. Typical forms are as follows: (1) the introversions, wherein the individual meets his problem through imagination and mental identification instead of actually; (2) rationalizations, wherein one may attempt to justify a certain act even though he realizes its irrationality, to project the responsibility for the thwarting upon some innocent party, or even to persuade himself that the thwarted activity was really not a desirable one; (3) the prejudices, whereby one refuses to entertain any evidence likely to unsettle certain very basic desires; (4) compensations, whereby a substituted act may take the place of the one thwarted; and finally, (5) the dissociation or repression of desires unable to be faced either directly or indirectly.

**Learned behavior illustrated.** The reader need but reflect upon the actions of any adolescent to find countless illustrations of the above-mentioned learned ways of behavior.<sup>1</sup> They go a long way toward explaining such manifestations of adolescence as the following: to imagine one's self acclaimed the football star; to find identification with King Arthur, Robin Hood, or other ideal characters; to explain a low examination grade in terms of the teacher's unfair treatment rather than real inferiority, or else to seek solace by an appeal to the fact that one should not expect to succeed in both body and brains; to refuse to admit that any good thing can come out of the Nazareth of a rival school; to substitute a

<sup>1</sup> For a fuller account, see Wells, F. L., *Mental Adjustments*. (D. Appleton and Company, 1920.) The topic is again treated in Part IV of Section I.

multiplicity of kind acts toward the teacher for real student endeavor; or, finally, to seek to wear the ring of one's adolescent lover.

It is clear that, by the time adolescence is reached, the pupil has at his command a gigantic stock of reacting mechanisms — reflexive, instinctive, or learned (habitual); that these latter, whether primarily physical or mental, direct or "escape" mechanisms, understood by the possessor or not, have been slowly forming in service to the instincts; and that adolescence will find the individual placed in a wider set of environing situations requiring adjustments differing perhaps in quantity but not in kind.

### QUESTIONS AND PROBLEMS

1. In the task of guiding the learning of a pupil, which of the five stages in learning gives the teacher the greatest opportunity to aid the learner?
2. Analyze into its stages the complete act of learning to manipulate the typewriter; knit; extract the cube root of a polynomial; memorize *Thanatopsis*.
3. "All learning is by trial-and-error, ideational learning being suggestive of the level (ideational not motor) upon which the learning takes place." Evaluate the truth of this statement.
4. Is the capacity to learn innate or acquired?
5. Illustrate from your own life each type of thwarted adjustment. What shall the adolescent do with his thwarted desires?
6. Analyze the following case into its constituent elements, showing the elements making up the stimulus and the instinctive and learned factors entering into the response:

On the eve of the annual football game, several hundred students, boys and girls, advanced upon the school building of the rival school, decorated it with pennants and streamers, and painted characteristic legends upon its marble façade, with the result that hundreds of dollars of damage was done and disciplinary measures were considered necessary by the school authorities.

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# PART III

## SYSTEMATIC ASPECTS OF ADOLESCENT MENTALITY

### CHAPTER VII

#### KNOWING AND THE ADOLESCENT

FOR many generations it has been customary to discuss the mental life under three headings — knowing, feeling, and willing. This classification of mental activity offers practical values quite outweighing the dangers the student of psychology may face should he allow himself to think of these three aspects of mental life as separate, either in structure or functioning. This triple classification offers logical values, and gives opportunity to set fairly clearly and in classified form the facts of major significance regarding the mentality of the adolescent.

**General psychology of knowing.** By the knowledge processes are meant those processes of mind constituting the “whats” of consciousness. In their totality they include the mental materials and processes commonly grouped under sensation and perception, and having reference primarily to the world objective to the individual; memory, association, and imagination, having reference primarily to the retention and reinstatement of earlier mental processes; and, finally, the logical processes of conception, judgment, and reasoning, referring primarily to the use of the more elementary processes made by the individual in meeting the complex situations in which he constantly finds himself placed.

As a matter of logical distinction, it is, of course, true that one may conveniently speak of these "whats" of consciousness — the sensations of red, blue, etc.; perceptions of objects in the environment; memories and imaginative productions; and, finally, the vast collection of concepts, instances, and powers of judgment and the trains of judgments making up the rational or thought process, quite in contradistinction to the affective or feeling-tone accompanying these knowledge processes; likewise in distinction to the activity or volitional aspects as viewed both from the mental and physical side. These "whats" of consciousness commonly make up the materials of experience, and presumably are retained in definite neural traces left on the cortex of the brain. The terms knowledge, cognition, and even intellect or intelligence are commonly employed as practically synonymous to the "whats" of consciousness.

**Recent important developments.** Two rather significant developments in the psychology of the knowledge processes have been made in very recent years:

(1) The general or common features of knowledge have been brought into contrast with the more specialized. It is becoming quite customary to speak of the general materials and processes of perception, memory, conception, reasoning, etc., and, in addition, of the special capacities of musical talent, art, mechanical abilities, special disabilities in the number sense, etc. This suggests the rather wide and common distribution of the knowledge processes among mankind, and the further distribution of special traits and powers to certain individuals in any large group.

(2) The attempt is being made regularly to give a quanti-

tative, mathematical statement of the knowledge processes in such a way that, after measurement, it becomes possible to state how much or how little the individual possesses of materials and powers constituting knowledge. In most instances this move towards measurement has been to secure a cross section of the knowing powers of mind; by giving appropriate tests in such fields as those above listed, to arrive finally with a fairly clear profile of the knowledge functions of the mind; and, by addition, to arrive also at a conclusion as to the entire strength of the intelligence of the individual being measured. This quantitative aspect represents probably the most outstanding contribution made by modern psychology for application and employment in the approach to vexing educational problems.

**Conditions of adolescent knowledge.** As one reads the extensive literature regarding adolescence, he generally comes to the conclusion that adolescence is a period showing quite marked improvement or enlargement of the knowledge processes. Certain writers emphasize the serial or periodic development of the mind in general, consequently urging that sense perception and sensory discrimination should appear prominent in the education of young children. They also hold that memory and habit-fixation with drill represent the crowning psychology before the age of twelve, and that adolescence becomes primarily the age for reasoning. Other writers have emphasized the appearance in adolescence not only of the reasoning powers of mind, but also an increased acuity of the various sensory processes, for example, vision, smell, hearing, touch, and even taste, as well as the appearance of radically new interests and a remarkable freeing of imagination.

As offered against this theory of periodic development, which lends itself so easily to the saltatory view entertained by some writers on adolescence, there may be placed the more recent theory of concomitant development. This latter viewpoint would emphasize that all the basic mental powers begin their functioning very early in the life of infancy, and that their relative strength as shown from time to time is determined by the amount of exercise they have had, as well as by the type of experience and materials provided them for exercise. Adherence to the first viewpoint is reflected by such writers as Hall, Slaughter, Tracy, Lancaster, Rosenkrantz, and perhaps Bagley; the later view being represented by Dewey, Thorndike, Terman, and other psychologists whose point of approach to the problem has been primarily that of educational and intelligence measurements.

A survey of the experimental literature gives evidence in favor of the second viewpoint only. There is no evidence secured, under controlled laboratory conditions, that shows any "sharpening of the senses" for the adolescent. The statistics for memory and imagination, as read from any typical table of norms having to do with such mental feats as the memory span for digits, concrete, abstract, related or unrelated words, or memory ideas, show nothing but a gradual growth from the eighth year on to later adolescence. Even the logical processes have made their appearance long before the beginning of the teen age, it being shown, upon psychological analysis, that all mental factors involved in the reasoning processes — for example, as employed in high school mathematics — have long since operated in the

process of reading and understanding the typical sentences presented to even the child of the second grade.

**Significance of adolescent knowledge in adolescent development.** The significance of the above is that in the knowledge life the adolescent differs from the child in just about the same way that children, adolescents, and adults differ among themselves. To quote Thorndike, we read that:

Not some mysterious inner transformation, but the enlargement and refinement of experience, the formation of systems and suitable ideas, the knowledge of aspects or elements of things essential to different purposes, the acquisition and habitual use of systematic methods of forming and testing conclusions, the growth of skepticism concerning the similarity of things alike in some respects, the definition of terms and the crystallization of experiences into judgments, are what make the rational man out of the blundering child.<sup>1</sup>

This viewpoint finds itself in close agreement with the treatment given instincts in the preceding chapter. It emphasizes that the instinctive and habitual powers of reaction have been in operation through all of pre-adolescence; that nothing radically new of an instinctive type is to make its appearance in adolescence; that all the adolescent's powers of mind are so interrelated and interconnected that the theory of concomitant development alone becomes tenable; and that the marked differences of intelligence shown among adolescents must be explained in terms of differing original endowment and the effects resultant upon the experience and training the particular individual has had.

<sup>1</sup> Thorndike, E. L., *Notes on Child Study* (2d edition), p. 97; reference quoted from Inglis, A., *Principles of Secondary Education*, p. 46. (Houghton Mifflin Company, 1918.)

**Measurement of adolescent intelligence.** Psychologists have shown considerable inability to agree upon a satisfactory definition of intelligence, and yet agreement is quite general that, in speaking of intelligence, they have reference primarily to the knowledge powers of mind instead of the emotional and volitional; to the innateness aspect, rather than the acquired; to the capacity for learning, rather than to the mere detailed knowledge facts which have been learned; finally, that it is "the capacity of an individual to adapt himself to a new situation."<sup>1</sup>

In spite of any seeming lack of definiteness in definition, few psychologists have any hesitancy in proceeding to the measurement of mental powers comprising the so-called general intelligence, being convinced apparently that the measurements secured have such strong values in the applied fields of predicting and controlling the behavior of those tested as to impel the securing of these values, even though preliminary definition may be somewhat lacking in definiteness. A study of the typical instruments for measurement, the so-called general intelligence tests, shows not only that the testers are quite in agreement as to the types of tests to be employed for inventorying certain mental powers, but that the powers or processes investigated are primarily the knowledge functions. For example, any typical group test for general intelligence is likely to contain, among its battery of exercises, certain questions or problems having to do with understanding and carrying out simple directions, arithmetical reasoning, common-sense judgments, memory, compari-

<sup>1</sup> Hines, H. C., *Measuring Intelligence*, p. 11. Riverside Educational Monographs. (Houghton Mifflin Company, 1923.)

son, generalization, straightening out mixed-up situations, and the range of information possessed by the individual being tested.

**Overlapping of mental ages.** The reader is doubtless familiar with the terms employed for stating the results of intelligence measurement, notably, the mental age (M.A.), intelligence quotient (I.Q.), and accomplishment quotient (A.Q.). It is doubtful, however, whether most of us have lived sufficiently long with the startling facts of psychometrics, regularly to be found in any typical school or classroom, as to be brought to a proper realization of the wide range of intelligence among children of the same chronological age and the vast overlapping in the mental ages of children in the several grades of the public schools. Terman <sup>1</sup> has presented a figure to show the actual distribution of mental ages disclosed by the Stanford-Binet scale in first, fifth, and ninth grades of a typical public school system, emphasizing the fact that the upper portion of both the first grade and the fifth grade overlaps the lower portion of the fifth and ninth grades respectively. It is also shown that, upon investigating the intelligence of nearly one hundred unselected school children twelve years of age, the range of I.Q. was from 66–75 (5 per cent of the cases) to 126–135 (8 per cent of the cases), with the mode at 96–105 (28 per cent of the cases). Finally, when one undertakes to find out whether the adolescent is classified and working in the grade presumably dictated by his general intelligence, the following is shown. (See table on page 88.)

<sup>1</sup> Terman, L. M., *The Intelligence of School Children*, pp. 25–26. (Houghton Mifflin Company, 1919.)

MENTAL AGE (Years and months)	GRADE ATTENDED					
	III	IV	V	VI	VII	VIII
11-6 to 12-5	1.0%	8.3%	19.8%	41.1%	16.6%	12.5%
12-6 to 13-5		2.6%	9.0%	37.1%	24.3%	27.0%
13-6 to 14-5	1.5%		6.0%	31.0%	23.5%	38.2%

The above and any desired amount of similar facts showing the failure of typical school classification either to provide grades of homogeneous mental ability, or to place the individual child in the particular grade likely to make an appropriate tax upon his mentality, lead the student of adolescence to investigate such topics as the intelligence of typical adolescent groups entering the seventh grade, the junior, and the regular or senior high school, as well as the educational outlook and history for entrants of known intelligence.

**General intelligence and typical adolescent groups.** The intelligence make-up of adolescent groups naturally found in school makes an interesting story. Certain of the more typical groups are discussed below. The reader must keep constantly in mind the fact that, whenever figures are presented to show the characteristics of seventh graders, junior high school entrants, etc., he has, while a valuable, only a partial picture of all adolescents about the ages 12 to 14 years. This is, of course, due to the fact that school retardation and elimination have been at work, even from the first grade, both to "load" the elementary grades with repeaters and to eliminate the failing adolescent at the earliest legal age, often before he has reached the level of the school system supposedly

prepared as his typical school (the junior high school). With the age-grade statistics of Ayres, Strayer, Thorndike, King, Morton, Berry and others in mind, all tending to show that, in keeping with the general rule that approximately one child in three is retarded, of which more than five per cent are retarded three years or more, and nearly fifteen per cent two years or more, the reader must consider that the facts set forth below somewhat overstate the case for adolescence and make results appear more favorable than they would if the groups were not partially selected in character.

**The educational treatment of adolescents.** Facts significant for the educational treatment of adolescents are shown by the following:

(1) *Junior high school entrants in a large city school system.* Reference to the statistics listed in Part I of Section II of this book shows the enormous range of intelligence scores of adolescents entering simultaneously the Washington Junior High School, Rochester, New York. In a very significant article, Glass <sup>1</sup> shows both the necessity and practicability of forming nine 7B classes out of the large group of entrants, making each homogeneous in respect to intelligence as shown through testing. Also, he points out the curricular adjustments made for groups of known intellectual capacity, especially for the two lowest study coach classes, and the unusual value of intelligence measures not only as placement aids but also as a check upon the promotional standards of the 6A teachers.

(2) *Entrants in a small junior high school.* That the wide

<sup>1</sup> Glass, J. M., "Classification of Pupils in Ability Groups"; in *School Review*, vol. 28, pp. 495-508. (1920.)

distribution of adolescent intelligence is not unique for a large, cosmopolitan city junior high school is shown by such results as were gathered by Fuson <sup>1</sup> for the Covington, Kentucky, Junior High School. The range of I.Q. was from 75 to 154 per cent, with the median at 116.

The median I.Q. for the best half of this student group (70 in number), as selected by 6A promotion marks, was 116 per cent, the lower half 110 per cent. Two 7B classes were then organized largely on the basis of the I.Q., it being thought desirable to place in the poorer group no one whose I.Q. was above the median of the better group. As finally determined, the better group showed median I.Q. and 6A academic records of 127 and 91.6 per cent respectively, the lower 102 and 84.8 per cent respectively.

(3) *Entrants in the ninth grade of the four-year high school.* Proctor has analyzed, perhaps better than any one else, the typical student material with which the ninth grade of the four-year high school works.<sup>2</sup> For 137 entrants to the Palo Alto High School, he recounts an age range from 13-0 to 19-3, with a median of 14-11. The mental age scores ranged from 12-8 to 19-6, with a median of 15-10.

(4) *Intelligences and success in high school.* A study of the relation between mental age and the school marks of these entrants (correlation .45), the I.Q. and school work (correlation .545); as well as the intelligence of the entrants who do not reënter high school the following year, lead Proctor

<sup>1</sup> Fuson, H. H., from unpublished data on file at the College of Education, University of Cincinnati.

<sup>2</sup> See Terman, L. M., *The Intelligence of School Children*, pp. 75 sq. (Houghton Mifflin Company, 1919.)

to conclude that — in spite of the fact that the long period of elementary school work had sufficed to eliminate practically 60 per cent of those of high school age — the high school elimination was itself still further highly selective; that the pupils who dropped out were mainly of inferior ability; that the typical high school offers little which can be done by pupils not possessing at least 90 I.Q.; and that such a high school is withholding proper training suitable to a third of the children of high school age, primarily since these children do not possess, in sufficient amount, the particular type of intelligence required for mastering the course of study so typical of the so-called best high schools.

(5) *Intelligence of high school seniors.* In the significant state-wide survey of high school seniors, Book <sup>1</sup> shows, among other findings, the enormous age and intelligence range of students graduating from the twelfth grade of the high school; that the younger graduates almost without exception show the superior intelligence, hence duplicating the findings for the elementary school; that seniors with all grades of mental ability, from the lowest to the highest, are going to college in about equal numbers; that the high schools of the state are not adapting themselves to the inequalities in native mental strength of their students as well as they should; and finally, that many adolescents have not planned to go on to college even though their abilities are of the highest order, while many others plan upon college and a professional career without seeming to have the ability to succeed.

<sup>1</sup> Book, W. F., *The Intelligence of High School Seniors*. (The Macmillan Company, 1922.)

(6) *Adolescents in college.* Later adolescence, as measured by psychologists in practically every university and college since their return from the psychological work of the World War, shows the range and variability of mental age found typical for all other groups, selected or unselected, elementary or high school, mentioned above. The massive periodical literature of the last few years merely calls attention to facts the college authorities have long since known — that the colleges receive the intellectually élite of the population of college age; that probably 10 to 15 per cent of the race has the capacity to do the work, as regularly set by the liberal arts college; and that colleges admitting by examinations and other methods of rigid selection tend to draw an entering class of higher median intelligence than the institution admitting upon certification of high school graduation.

(7) *Adolescent intelligence and school accomplishment.* Studies made of the degree to which the adolescent puts to use his capacity to do school work shows quite uniformly that the brighter students, while, of course, doing better work in absolute terms than their slower classmates, do relatively poorer when accomplishment is studied in relation to intelligence. For example, it has been shown <sup>1</sup> that, for seventh-grade groups made up as *fast* or *slow* on the basis of teachers' marks, no one of the brighter sections in this or any other grade lived up to the expectations properly made upon it, while the poorer sections were quite uniform in accomplishing 100 per cent or more than would seem proper for the intelligence capacity possessed. The writer showed the

<sup>1</sup> Stebbins, Rena, and Pechstein, L. A., "Quotients I, E, and A"; in *Journal of Educational Psychology*, vol. 13, pp. 385-98. (1922.)

same results when he determined the accomplishment quotients (A.Q.) for college students in a single college study. An inspection of Tables V, VI, and VII shows that adolescents, just like the rest of mankind, employ their varying mental endowments in school achievement with a zeal in-

TABLE V. SHOWING THE PERCENTAGE OF PUPILS IN ELEMENTARY SCHOOL AND COLLEGE FALLING WITHIN CERTAIN EFFICIENCY GROUPS

	ELEMENTARY SCHOOL	COLLEGE		
		Men	Women	Total
Below 90 A.Q.....	19%	10	38	17
90-110 A.Q.....	52 "	25	31	36
Above 110 A.Q.....	29 "	65	31	57

TABLE VI. FREQUENCY DISTRIBUTION OF ACCOMPLISHMENT QUOTIENTS

ACCOMPLISHMENT QUOTIENTS	ELEMENTARY SCHOOL	COLLEGE		
		Men	Women	Total
40-49		1	1	2
50-59			3	3
60-69	1	1	3	4
70-79	13	2	4	6
80-89	53	9	5	14
90-99	93	17	7	24
100-109	96	14	6	20
110-119	63	17	6	23
120-129	25	23	1	24
130-139	10	15	3	18
140-149	5	10	1	11
150-159		5	1	6
160-169		9	1	10
170-179		3		3

TABLE VII. SHOWING THE CHRONOLOGICAL, MENTAL, AND EDUCATIONAL AGES OF SIX VII-A PUPILS, SELECTED FOR SHOWING THE INTERPRETATIVE VALUE FOR THE INDIVIDUAL CHILD OF THE SEVERAL MEASURES PRESENTED

PUPIL	C.A.	M.A.	EDUCATIONAL AGES									QUOTIENTS		
			Reading	Addition	Subtraction	Multiplication	Division	Problem	Sentence Spelling	List Spelling	Mean E.A.	I.Q.	E.Q.	A.Q.
D. M. . .	13-8	11-2	10-10	12-4	13-3	13-2	13-11	12-10	10-10	10-3	12-0	82	88	108
F. Z. . .	12-8	16-8	13-11	11-8	12-7	11-5	11-10	14-11	13-9	12-6	13-6	132	107	80
E. D. . .	13-8	13-11	12-8	15-1	12-10	13-5	13-5	13-9	14-10	14-2	13-6	101	99	97
G. M. . .	10-9	9-6	11-3	11-0	11-9	11-7	12-0	12-11	10-10	9-9	11-8	57	70	123
S. R. . .	13-4	15-7	14-4	14-5	14-0	14-6	14-8	13-9	14-8	13-5	14-2	117	106	91
S. F. . .	10-4	16-0	15-6	15-5	14-4	14-6	14-4	15-6	15-2	10-0	15-3	155	148	95

versely in proportion to its possession, and that the curricular requirements set by the more orthodox teacher demand and secure far more from him possessing mediocre capacity than is required or secured from the unusually gifted.

(8) *Sex differences among adolescents.* The modern methods of measuring intelligence throw considerable light upon this question of perennial interest. It has, of course, long been assumed that the male is more intelligent than the female of the species, although writers on adolescence have seemed to admit a superiority in native wit shown by the girl up until the onset of adolescence. Of course, adolescence has been deemed a period wherein reasoning comes to show itself, hence the masculine monopoly of that mental trait naturally brought the youth to pass the maid in the early teens, and to continue to hold the superiority in intelligence which he had somewhat tardily attained.

A survey of the results of intelligence tests throws this conclusion into question. Terman has shown<sup>1</sup> that the average intelligence of women and girls is as high as that of men and boys, although there is some slight yet inconclusive evidence that, from about the fourteenth year on, the average boy seems to pass the girl. This fact must be discounted, however, for a grouping by sexes of entering classes in college shows a median superiority for the youth only when the masculinely conceived *Army Alpha* test is used; employment of the *Otis* (this much more typical of the school experience the college freshman has had) shows the same median for the two sexes.<sup>2</sup>

In general, the following seem the safe conclusions to draw: sex differences in intelligence, as shown either in early or late adolescence, are small and insignificant; such differences as may appear are trivial in comparison with the enormous range shown by either sex; the range of variability is slightly more marked for the male, both with reference to gross inferiority and marked superiority; nothing exists from the standpoint of intelligence to give any scientific justification for segregation in classes, classification in ability-groups, guidance, etc. The above statements are true as presenting a total and *average* picture of adolescent mentality, although it is no less true that the

boys were decidedly better in arithmetical reasoning, giving differences between a president and a king, solving the form board,

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<sup>1</sup> Terman, L. M., *The Measurement of Intelligence*, p. 69. (Houghton Mifflin Company, 1916.)

<sup>2</sup> Hendrickson, G., "Assaying and Interpreting the Intelligence Factor with College Students." (Unpublished Master of Arts thesis, University of Rochester Library.)

making change, reversing hands of clock, finding similarities, and solving the "induction test." The girls were superior in drawing designs from memory, æsthetic comparison, comparing objects from memory, answering the "comprehension questions," repeating digits and sentences, tying a bow-knot, and finding rhymes.

(9) *Maturity of intelligence during adolescence.* Psychologists have found themselves quite in agreement that general intelligence reaches its normal maximum of growth during adolescence. The mental age of sixteen has often been considered typical for the so-called normal adult intelligence, and this age has been used in most calculations for determining subnormality among adults. Terman has been largely responsible for popularizing this particular mental age as connoting maturity of general intelligence, but no one is more ready than Terman to state the probable unreliability of this particular choice. In fact, the recent discussions of Bagley, Whipple, Terman, Rusk, Doll, and Dearborn raise questions not only regarding the normal time for the maturity of general intelligence, but also some questions regarding the exact character of what is maturing.

This is not the place for dipping one's oar into the troubled waters stirred up by the illustrious navigators mentioned in the preceding paragraph.<sup>1</sup> It may be pointed out, however, that the controversy at least has cleared the atmosphere to such an extent that the average reader of these pages may safely think of general intelligence as being made

<sup>1</sup> The reader is referred to Hines, H. C., *Measuring Intelligence* (Riverside Educational Monographs) chap. viii, "The Measurement of Intelligence and Democracy in Education," for what is probably the best summary of the recent controversy regarding the nature and significance of the maturing of general intelligence.

up quite largely of the more basic knowledge functions; that these, as mental tools for the acquirement of mere knowledge facts, presumably reach their maximum of normal growth during adolescence. Bagley and others would admit this fact and think of this aspect of mental growth as vertical in character, hence considering the specific acquirement of the broad facts of knowledge and skills as the aspect of horizontal growth, both preceding and following the maximum attainment of the vertical. This distinction of the vertical and horizontal aspects of mental development has been drawn for nearly two decades, and all students in the field of individual differences must keep it sharply in mind. Upon the facts of vertical growth rest primarily the main arguments in favor of the differentiated curricula of junior and senior high schools, since, presumably, such curricula give opportunity for individual vertical growth to the fullest extent possible, permitting detailed training of the specialized type to take place as the horizontal aspect of mental development.

The exact age at which this vertical aspect of general intelligence tends to reach maturity is, as said earlier in this chapter, open to some debate. Doll <sup>1</sup> has emphasized with some vigor that the median general intelligence age should be  $13\frac{1}{2}$  years, herein reducing the Terman norm by  $2\frac{1}{2}$  mental years. Doll's conclusions are drawn primarily from the study of the scores made by drafted men in the United States army. While Doll's results are suggestive and have values in themselves, they are not drawn from a sufficiently

<sup>1</sup> Doll, E. A., "New Thoughts about the Feeble-Minded"; in *Journal of Educational Research*, June, 1923.

unselected group to furnish reliable guidance for the educational handling of adolescence.

Dearborn has given the results of his investigation of the intelligence quotients of adults and mental ages especially of adolescents,<sup>1</sup> basing his findings upon unselected groups of 14-and-15-year-olds. He was able to secure the most unselected group of adolescents we have on record, since he employed a large number of cases who had left high school and were at work, together with those still in regular high school or part-time instruction. His results in general show that the average adult mental age "is approximately fourteen and one half years, and that the calculation of the intelligence quotients on this basis gives results in closer agreement with established facts than by the method in current use. The conclusions of this study are believed to be more reliable than those based on the Army Alpha and Binet tests, because the tests used in the study are better suited to the purpose, the main groups studied more representative, and the conditions under which the tests were taken fairer for the comparison than in the case of the Army testing."

**Significance of these studies for the junior high school.** In keeping with the above, two significant facts may be pointed out: (1) the intellectual superiority of adolescents remaining in high school over the mental capacity of adolescents who have dropped school and are at work is clearly shown; and (2) with fourteen and one half assumed as the average mental age of adults, one must always expect an equal range of variability on each side of this average —

<sup>1</sup> Dearborn, W. F., "Intelligence Quotients of Adults and Related Problems"; in *Journal of Educational Research*, vol. 6, pp. 307-25. (1922.)

that cases will be included in the range both of those who reached their maximum of intellectual growth quite early in childhood as well as others continuing mental growth until quite late in adolescence.

The significance of such facts as the above is undoubtedly great. It seems clear that the general powers of intelligence — for example, capacity to perceive, discriminate, remember, imagine, form concepts, execute acts of judgment and reasoning, etc. — reach their normal maximum on the average somewhere around the ages fourteen and one half to fifteen. Presumably this means that, with the more basic factors of mentality developed, the adolescent is entirely ready to adjust to his life-calling and shape his career accordingly. Perhaps it is right to state that two major functions of the adolescent school are to give the adolescent familiarity with the various life-callings, and then to assist him, toward the close of the junior high school period, in his choice for a life-work. The evidence seems to point to the fact that this act of choice naturally is to be made toward the close of the typical junior high school period, and at approximately the time when general intelligence reaches its maturity of growth.

**Other kinds of intelligence.** The question is often raised whether the tests of general intelligence do not succeed best in measuring the somewhat academic qualities of mind which are of fundamental importance for success with the typical school curricula. Phrased in another way, do not intelligence tests take account of the subject's ability to effect generalizations and abstractions and to manipulate symbols (generally verbal) and the language forms, leaving untouched vast ranges of mentality perhaps more essential for

certain individuals in adjusting to problems not normally having to do with the characteristic textbook curriculum? May not an ability to manipulate things (mechanical intelligence), or to handle people (social intelligence), sometimes be possessed by an adolescent to a degree quite surpassing that of manipulating ideas (general intelligence)? Does not the student of adolescent mentality, and of course of pre- and post-adolescence as well, need to think of the problem of educational treatment primarily in the light of the *totality* of the intelligence (general, mechanical, and social) possessed by the individual student?

The answers to many implications of the above questions are suggested by Stenquist,<sup>1</sup> who investigated both the general mechanical ability and general intelligence of several hundred adolescent boys attending the seventh and eighth grades in a typical public school of New York City. He found that the correlation between these two kinds of abilities is the low one of  $.21 \pm .07$  for the 275 seventh- and eighth-grade boys; and that, when the cases are distributed into their proper quadrant in respect to the two measures, the following percentages are found:

- D. Above average in both general intelligence and mechanical ability — 26 per cent.
- B. Above average in general intelligence and below in mechanical ability — 23 per cent.
- C. Below average in both general intelligence and mechanical ability — 20 per cent.
- A. Below average in general intelligence and above in mechanical ability — 31 per cent.

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<sup>1</sup> Stenquist, J. L., *Measurements of Mechanical Ability*. (Contributions to Education, no. 130, Teachers College, Columbia University, 1923.)

**Significance of these facts for guidance.** From such figures it is easy to conclude that approximately a fourth of adolescent boys, although below the average in ability required for progress in the regular program of school studies, are above average ability in mechanical tests (A); approximately an equal percentage could justly be encouraged to seek a career in mechanical fields, since abilities of both mechanical and abstract intelligence are possessed above the average (D); another equal percentage to shun specialization in a mechanical field and seek professional training, wherein abstract intelligence is fundamental (B); and finally, there will remain the large group (C), below average in each ability, where, except as quite different types of abilities are occasionally discovered, education will always find its most difficult and discouraging problem. Perhaps out of such groups as the four just listed come respectively the expert mechanician, the graduate engineer, the lawyer and teacher, and the ne'er-do-well known to all communities.

In considering the educational treatment of adolescents, the reader should remember that there is really a case to be made for the individual of low I.Q.; that the present strong tendency to "attach a stigma to pupils scoring low in the so-called general intelligence tests" is wrong; that the wide range of individual differences among human beings is matched and excelled by the complexity of the countless number of tasks — mechanical no less than intellectual or social — the work of the world demands; that the privilege and obligation of a really democratic system of education is to give all children an equal opportunity to develop whatever abilities they may possess, to the end that each shall

finally become placed in that social position where he may find economic independence, self-respect, and an opportunity for self-expression and happiness.

### QUESTIONS AND PROBLEMS

1. Suggest possible reasons for the theory of periodic development.
2. Based upon the known facts of adolescent intelligence, answer this question: Who should be admitted to the junior high school?
3. Is there evidence drawn from the data of mental growth to justify a 6-3-3 plan of organization? A 6-6 plan?
4. In the light of the data presented in this chapter, justify the following functions of an adolescent school: fixation; exploration; making and testing a choice.
5. In a junior high school enrolling 350 pupils September 1, from eight contributing schools, how would you set about to organize the first-year pupils with special reference to homogeneous classes, curricular adjustments, permanency of grouping, and pupils on trial promotion?
6. What factors other than intelligence may help to determine successful student work?

## CHAPTER VIII

### EMOTION AND THE ADOLESCENT

**General psychology of the emotions.** Emotion may be roughly viewed as the “hows” of consciousness, in distinction from the “whats” of consciousness constituting knowledge. As such, emotions would comprise all feeling states giving to any moment of mental life its glow, warmth, pleasantness, or depression; it suggests how the mind is *affected* or *toned* by the experiences, generally cognitive in character, constituting it. Needless to say, the very term “emotion” suggests this “moved” or wrought-up state of mind.

As mentioned in Chapter IV, emotions are to be thought of, side-by-side with instincts, as hereditary modes of response. This leads to two ways of viewing the emotion — the one mental or subjective, the other physical or objective. From the mental and conscious point of view, the emotion is the tendency to feel — as opposed to the instinct as a tendency to act — characteristically in the presence of the situation calling both of them forth. As shown in the classification by McDougall presented in Chapter V (page 57), each of the principal instincts is paralleled by a primary emotion. It is doubtless in recognition of this affinity between the two innate forms of reaction, instinct and emotion, that psychologists are often led to speak of the emotion as the consciousness of instinctive adjustments running their natural course, hence sensational in character, and even to confuse such purely organic states as fatigue, hunger, and thirst with the

much less localizable “hows” of consciousness — the true emotion.

As seen from the second viewpoint, the emotion becomes an “hereditary ‘pattern-reaction’ involving profound changes of the bodily mechanism as a whole, but particularly of the visceral and glandular systems,” thus differentiating the emotion from the instinct in that the “radius of action (of the former) lies within the individual’s own organism; whereas in instinct the radius of action is enlarged to such an extent that the individual as a whole may make adjustments to the objects of the environment.”

The reader should gain the full measure of truth from each of the above — the emotion is a strong feeling-tone complicating the conscious states of mind; it is innate and inextricably associated with instincts; and it involves the visceral and glandular systems of the body, in contrast to the cerebro-spinal nervous system with which primarily the knowledge powers of the mind have to do.

Certain additional facts relating to the general psychology of the feeling life may well be listed:

(1) When one attempts to classify the feeling processes by basing the classification upon such logical factors as the strength versus weakness or the brevity versus extension of the state itself, there is secured a complex result which, while in no sense a perfect classification, includes simple affection, feeling, emotion, mood, sentiment, temperament and passion.

(2) Feeling states are generally found inextricably interwoven with cognitive processes, even becoming at times firmly organized and associated with certain objects of cognition, as is the case of the sentiments.

(3) The development, systematization, and control of the emotional life shares importance with both the instinctive and cognitive in bringing the individual finally to a satisfactory ability of reacting, not to the demands of a fairly primitive jungle existence, but to the complex life of modern society.

**The organs of emotional response.** Reference has already been made to the autonomic nervous system (see Chapter I) and to the smooth muscles and glands with which it directly functions. When the reader remembers the great changes both of glandular structure and function during adolescence, together with the fact that the smooth muscles and glands primarily constitute the “bodily seat” — better, provide the major portion of the sensations constituting the emotion — it becomes clear that *emotion, both as to its strength, rapidity of growth and disturbance, rates as one of the most critical and prominent features of adolescent mentality.*

In the working of the complicated machinery controlled by the autonomic system — the smooth muscles, the duct glands (salivary, gastric, pancreas, liver, kidney, and skin), and the ductless glands (thyroid and parathyroid, adrenal, pituitary, pancreas, and especially sex), with emphasis on the last-named group — do we seem to find the basis for such outstanding facts of adolescent emotion as the following:

(1) A decided “drive” or depression, placing the youth respectively quite above or below his normal level of equilibrium.

(2) Occasional persistency and strength for physical and mental application quite beyond the ordinary.

(3) Occasional inability to accomplish the daily duties, the emotional picture being at times that of excitability, depression, or instability.

The exact physiology of emotional expression has become quite clear, thanks to the researches of Cannon, Watson, Lewis, and others. Physiological fact is not psychological, but the former, in emphasizing that certain emotional stimuli (a) impede, block, or accelerate activity of the duct glands and smooth muscles, and (b) cause the release of such substances as adrenin (hence producing glycosuria), the autacoids of the thyroid and the sexual glands, etc. (see Chapter I), very clearly emphasizes much that relates to the expansiveness of adolescent anatomy and physiology. It emphasizes the psychological fact that such activities stand as preparatory reactions (elaborate preparations for meeting a difficult situation, mental or physical) and, in their occurrence, constitute the so-called conscious elements of the true emotion.

**The genetic study of emotion.** If adolescent emotions are to be viewed as unlearned pattern-reactions, considered as mental or primarily physiological, as the reader may happen to choose at the moment, it becomes profitable to give attention in passing to the primitive emotions of childhood. When this is done<sup>1</sup> through a testing (primarily in maternity hospitals) of the stimuli apart from all training adequate for calling out such emotional reactions as belong to man's original and fundamental nature, there result, according to Watson, probably only three: *fear*, *rage*, and *love* (the last probably synonymous with the Freudian *sex*). So many stimuli alleged to call out these emotional reactions failed — for example, the dark, strangers, animals, etc., for fear — that the

<sup>1</sup> Watson, J. B. *Psychology from the Standpoint of a Behaviorist*, pp. 199 sq. (J. B. Lippincott Company, 1919.)

reader quickly comes to make, not a contraction of emotion as a factor in human behavior, but rather to recognize the tremendous habit-forming aspects to which the primitive emotions, no less than the instincts, are subject. (See page 59.) All that has been said regarding the inhibition and control of instinct, as well as of its attachment and detachment through the modifying influences of experience, applies with equal weight to emotion.

**Adolescent emotions.** It has been pointed out already that, from the anatomical-physiological viewpoint, the emotional reactions of the adolescent are many and strong. All writers on adolescence are making the most of this fact, and urge that admiration, awe, reverence, gratitude, scorn, contempt, hatred, joy, grief, pity, and shame; the æsthetic feelings; sentiments having to do with moral approval and disapproval; love both for a mate, one's fellows, and even God; and *ad infinitum*, sweep into existence as perhaps the outstanding characteristic of adolescent "renaissance." The reader has long since been warned against entertaining a saltatory viewpoint regarding these or any other aspects of adolescent mentality.

In so far as the emotions are concerned, it needs to be remembered that:

(1) Because of the rapid anatomical growth taking place, the parallel emotional states doubtless become quantitatively, not markedly qualitatively, different from those of pre-adolescence.

(2) Much of the emotional strength shown through the period is assignable, not so much to the new nature of youth, as to the far wider range of stimuli and situations the youth

naturally is facing, these calling into direct activity emotional reactions long since potential and no doubt previously operative to degree.

(3) Habit adjustments of the primitive emotional patterns have been forming for years, and these have now become sufficiently extensive as to attract and often compel attention.

(4) With the gradual expansion of the intellectual life the adolescent is thinking more deeply into his experiences — with friends, teachers, neighbors, textbooks, recitations — and a more complex and intense emotional setting is automatically aroused.

(5) The substitutional or compensational aspects described for instinct (pp. 66-78) are now at white-heat for the emotions, presumably because, in the conditions stated in "1" above, the adolescent must seek expression by some escape-mechanism for reactions not considered timely or appropriate to his own day and generation.

**Adolescent emotions as modified through experience.** The preceding paragraph has meant to emphasize the strength and range of adolescent emotion without doing injustice to its psychological history and background; also, to reduce it to principles common for all mental development and growth. In keeping with the latter, the following clarifying paragraphs are in order:

(1) Instincts, emotions, and habits become quite thoroughly consolidated and integrated both before and during adolescence. A typical case may be cited as anger, where is seen not only the tendency to fight (instinct) and to be angry (emotion), but also the learned technique of prize-fighting (if the fighting is of the overt physical type), as well as all the dozens of other learned (mental) ways — argument, bluffing, arbitration, swearing, etc. — the in-

dividual may employ in lieu of making the physical attack. Attitudes are primarily the combination of these unlearned and learned reactions, and such popular expressions as "lovesick," "lovelorn," "embarrassment," "jealousy," etc., point out the individual's consolidation to date of his related emotional, instinctive, and habitual powers, and suggest the deeply rooted rôle for good or ill the attitudes cannot help but play in one's life.

(2) Viewed more as phenomena of consciousness, the adolescent's emotional life is showing a remarkable compounding and systematizing of simple, primary emotions around some object or core competent to excite them. McDougall speaks of these organized and relatively permanent systems of emotional dispositions centered about the idea of some object as the *sentiments*, and properly emphasizes that, without the growth and final attainment of sentiments, one's emotional life would be chaos and his social relations and conduct unstable. This compounding through having the primary emotions (p. 57) brought into consciousness time after time, as the teacher "stages" the situation to call them forth (as is done, of course, through literature, music, art, religious instruction, history, etc., as well as giving opportunity for the parallel instinct to act), together with the way the rest of the world provides opportunity, both good and bad, for emotional organizations to get built up through experience, suggests the essential psychology of the real and pseudo-sentimental (attitudinal) states of mind so typical of the adolescent. Here may be mentioned such compoundings as admiration, awe, reverence, gratitude, scorn, fascination, envy, reproach, anxiety, jealousy, resentment, vengeance, shame, bashfulness, joy, sorrow, pity, happiness, sympathy, love, hate, and respect (see McDougall).

(3) The integrations and compoundings mentioned above, while often seemingly complete and set, are essentially very much still in the making, hence much of the deficiencies in steadiness and consistency, as well as the heights and depths of feeling states characteristic of many adolescents. Final systematization and the further development of rational powers doubtless will characterize the later stages of adolescence and manhood.

(4) The so-called repressions of emotions,<sup>1</sup> emphasizing the

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<sup>1</sup> See the discussion of Freud and his theories in Chapter XI of this book, "Disturbance of Adolescent Personality."

methodology of thwarting normal emotional arousements (notably sexual in character) by relegating them to the "subconscious," from which they return in disguise to give all sorts of nervous and mental trouble to the patient, probably add little new to the psychology stated for habit in relation to instinct; taken in conjunction with "1" and "2" above, it may be suggested that much of the supposedly repressed emotions quite normally enter into, or drain off into, the formation of the sentiments (for example, sex-love entering into a love of the beautiful in art, or an ideal character, or the Christ) in a way of reassociation or conditioning entirely natural to the psychology of learning.

(5) The conditioning of an emotional response by a stimulus not original for such is perhaps the most demonstrable and significant principle having to do with the adolescent's emotions. We have already commented upon the conditioned emotional reactions of fear, as shown by fear of the dark, graveyards, failure in class, or eternal punishment after death. In the same way, the attachments of anger or rage doubtless get joined to a certain person, even to a person resembling the immediate recipient of one's hostility, perhaps even as righteous indignation to classroom dishonesty, or as hostility to the authorities of the school, hatred of a rival church, club, or even political party. In the love situation, perhaps this psychology of the transferred or conditioned reflex is basic to all the secondary sex characters and to such profusions of everyday observation as the maternal affection a teacher occasionally showers upon a pupil, or a love-lorn swain bringing his emotional gifts to the younger brother of his adored one, or even to the handkerchief the adored one has dropped or the faded flower he is treasuring as her gift. In short, it scarcely could be otherwise, for it seems "safe to say that when an emotionally exciting object stimulates the subject simultaneously with one not emotionally exciting, the latter may in time (often after one such joint stimulation) arouse the same emotional reaction as the former."

(6) In addition to the attachments and detachments effected by the conditioned reflex, though perhaps neurally akin, a principle of diffusion operates. The adolescent, perhaps even more than the child, certainly more than the adult with his systematized feeling and volitional life, has to seek an emotional outlet in irrational and disconnected responses whenever emotional expression is blocked.

Illustrations without limit suggest themselves, for example, where one takes out his rage upon his younger brother, or perhaps "works off" his wrath in rigorous physical exertion, or diffuses his wealth of feeling by literally "loving everybody." Such diffusions, analogous to the random, spontaneous activity basic to learning, may drain off into whatever avenues environmental (social) and hereditary factors make possible; they, together with the conditioned reflexes, the occasionally seen unmodified emotional states, and the consolidated states of attitudes and sentiments, summarize quite thoroughly the real history of emotional development and its functioning in adolescence.

**Control of emotional reactions.** No debate is necessary to show that most of us need to, and do, exercise control over our emotional life. Most people have learned the necessity of this through such experiences as broken friendships, the tragedy of great disappointment, or in the much less serious form of disordered digestion, sleeplessness, etc., traceable to a too great emotional outburst. From scarcely more than cursory observation of a high school group, a teacher experienced with adolescents can pick out individuals of normal emotional adjustment, some quite emotionally unstable, and, after some experience with the group, the larger majority which, although not perfectly balanced emotionally, have worked out such compensations through habit that they meet satisfactorily most situations confronting them.

Two ways are logically open for training the emotions — improving the environment and retraining the individual — although upon analysis perhaps these reduce to one, that is, setting up conditioned responses. Certainly by controlling the physical factors of diet, sleep, bodily functioning, etc., improved emotional conditions may obtain. By surrounding the individual with worthy associations, socially ap-

proved objects and practices, even by parents treating their offspring in a consistently sane fashion, certain unfavorable attitudes (rage, hate, scorn, disdain, etc.) are given little opportunity to get unwisely systematized, assigned, or detached. Adolescence, in particular, finds the youth reacting to an environment largely connected with sex, this being literally filled with opportunities conducive to harmful attachments and poor outlets — illicit acts, lurid stories, loose companions, mistaken conceptions regarding birth, etc. Here, as never before, is the opportunity given to the parent or teacher to get close to the adolescent and help him to adjust to the sex situations confronting him.

**The opportunity of the school.** The obligation given the junior high school to control the youth's environment, both material and immaterial, physical and mental, so that appropriate ways of responding to a world of reality — with its members of the opposite sex, its group relations, its laws, customs, duties, skills, knowledge, its data essentially good, the beautiful and true, as well as all its evil — are built up, is very great; this obligation is matched only by opportunity given the truly adolescent school for the formation of attachments and healthy adjustments largely emotional in character.

## QUESTIONS AND PROBLEMS

1. Cite original illustrations for the consolidation of instinct, emotions, and related learned ways of reacting.
2. Analyze the complex states of reverence, scorn, and sympathy, with reference to: (a) the simpler emotions; and (b) the knowledge factors involved.
3. How real is the fact of suppressing emotions? Attachments and detachments? Illustrate.
4. How may the junior high school teacher develop a patriotic sentiment among her class of Italians? Respect for the rights of others? Be specific.
5. Is it correct to paraphrase as follows: "One learns to feel by doing"?
6. What should adolescents be taught to do, when feeling like giving way to an emotional outburst? Justify the attempt to control.

## CHAPTER IX

### VOLITION AND THE ADOLESCENT

**General psychology of volition.** The reader long since has come to view the human as a stimulus-response mechanism, with the obligation resting upon him to effect all sorts of adjustments to the conditions of life as they present themselves. He has seen that many of these adjustments are of the primitive reflexive, instinctive, and emotional types; also, that the cognitive and emotional factors of mind come to play their important rôle in furthering the welfare of the organism in its physical and social relationships. When one attempts to bring the above into perspective and to examine adjustment in its entirety, he is concerned with another "how" of consciousness — not the "how" of the effective life, but *how is action in its totality controlled*. Volition is the capacity to control action.

Volition has been a subject with which to conjure for psychologists, moralists, "quacksters," and others. At times its serious quest has led to the attempted isolation through introspection of a will element, with the hope of securing another mental element to place side by side with the elemental "stuff" of cognition (sensation and image) and feeling (simple affection). Again, effort has been profitably spent upon an analysis of the reaction experiment, with the endeavor to describe accurately the antecedents to action, the mental factors touching it off and controlling it, the method of reporting that the action is in process, etc. Finally, voli-

tion has at times been thought of in a very strict and narrow sense as limited to activity under the complete control and direction of the rational powers. Any discussion of volition or will as such fails even to be included in several recent textbooks on psychology.

**What volition includes.** Volition, as a full account of the control of action, naturally includes much that has been phrased regarding the innate tendencies to action, since volitional processes depend upon native impulses. Indeed, it is true that the development of volition is neither more nor less than a process of reducing our impulses to order, and that a mature character is simply one in which the impulses are thus subordinated to some systematized principles.<sup>1</sup> It also properly includes an account of the sensory, ideational, attentive, emotional, and interest factors. Finally, it involves a close-up view of those crises where deliberation and choice enter, that is, where *will* in its narrower meaning is functioning. Will herein becomes synonymous with the whole mind active (Angell), the sum of all the conditions of choice (Pillsbury).

As so phrased, will designates the entire original individual inheritance as modified by experience, when applied to action. The action chosen may be more instinctive than learned, impulsive than shaped by acquired ideals, given spontaneous instead of voluntary attention, immediately interesting rather than remotely so, or dictated by pleasure rather than by a sense of duty. In such moments of choice no decision-element emerges to throw its weight upon the side of the weaker claimant. Decision is dictated by past ex-

<sup>1</sup> Angell, J. R., *Psychology*, p. 430. (Henry Holt and Company, 1909.)

perience. The action chosen is the one proved most successful in the past, and promising best so far as the individual can gauge the future. No will is free — it is bound by the inheritance of human nature and the modifications stamped upon it by the forces of one's social and physical environment. The power to learn, and the possibilities of reshaping the raw material of instinct and emotion until there results the consolidations of ideals and attitudes of permanence and worth, unite to make the adolescent attain a freedom wherein his action springs from the broader field of past experiences and not from the narrower experiences of the present moment. Then he is free indeed.

**Adolescent volition.** In keeping with the tendency to view adolescence as the life stage par excellence when reasoning makes its appearance, and to consider growth as periodic, it is customary to make rather sweeping generalizations regarding will, as in the following stimulating quotation.<sup>1</sup>

It is an instructive study to place side by side, for examination and comparison, the child, the boy of nine to twelve, the boy of thirteen to sixteen, and the youth of seventeen to twenty. From the standpoint of the growth of will, they may be described as follows: in the child you find instincts and impulses operating with a minimum of internal check or control, and with only such external control as is able to set up a counter current to the operating impulse. This external factor exerts its power by offering something that appeals to the instinct of imitation, or gratifies some desire, or uses the instrumentality of pain by way of deterrent. Through repetition and association, habits of action begin to form, and in the next period (nine to twelve) this is perhaps the outstanding fact, from the point of view of will-growth. The area of ideation is, of course, becoming much enlarged, and whole new orders of ideas are

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<sup>1</sup> Tracy, F., *The Psychology of Adolescence*, pp. 109–11. (The Macmillan Company, 1920.) Reprinted with permission.

coming into active relation to the motor equipment. It is also true that progress is made in the direction of independence and autonomy of will. But after all, the consolidation of the motor mechanism in the way of habit-formation is the most conspicuous feature of the period.

In the adolescent period, while habit-forming continues, along with practically all the other characteristics of the previous periods, the transference of control from without to within undergoes a marked acceleration. And yet this control is by no means securely achieved in the first half of this period (thirteen to sixteen). As we have said, equilibrium is unstable. Feeling is prone to be tumultuous and riotous. Quiet, painstaking thought is not easy. There is much capriciousness of moods and fancies. As Sir W. Robertson Nicoll remarks, "at fourteen the insurgent years begin." The young adolescent scarcely has himself well in hand. In the latter half of the period (seventeen to twenty) most young people give distinct evidence that the motor machinery is becoming more regulated, and is under more effectual government. Thought is beginning to overtake feeling. Action is less frequently the outcome of impulse, and more frequently the outcome of deliberation. The higher centers of ideation are involved in the responses of the individual to the impressions that come into his consciousness. Impression issues in expression, neither so directly on the sensorimotor reflex level, as in the child, nor so largely in the way of habitual reaction, as in the boy, nor as the direct result of feeling, as in the adolescent of the early period. Action from motives, in the strict sense of that term, takes place more commonly than at any previous time in the life. And with the full attainment of this condition all the elements that enter into the character of maturity are already present. The difference between maturity and immaturity is a difference of degree. In no moral child is the element of inner control entirely wanting; and in no adult is that control absolutely constant, reliable, and complete. But all through the teens there is going on a great training in self-mastery. And if that self-mastery is not achieved by the end of this period, at least in such measure as to ensure a strong and well-poised manhood, the fault probably lies, either in some defective condition of mind or body, or in some failure of the educational process. "Spoiled children" are well named; for, in their case, through the lack of ex-

ternal control in the early years, the capacity for internal control has been dwarfed at the outset, and the whole plan of life marred and spoiled.

In so far as adolescence is a period where action is "more frequently the outcome of deliberation" than otherwise, it must be explained not in terms of some newly found gift of willing, but rather as natural reactions to the wider problems confronting one, made possible by the old primitive impulses now controlled, systematized, and shaped in keeping with the habits and ideals acquired through experience.

**Adolescent ideals.** Little data have been secured scientifically to show the range and strength of adolescent ideals. The usual questionnaires have commonly asked high school pupils to state whom they would most like to resemble when they become grown, or to give their vocational choice. Although the day of such methodology is happily passing, the summary of such investigations as Whipple considered offers both historic and guidance values:<sup>1</sup>

(1) *Ideals depend on age.* Despite some individual variations, there is a well-defined trend of development in ideals from childhood to maturity. Curves may be plotted, then, to show the rise of this or that ideal. Younger children mention always persons in their own family or in their immediate circle of acquaintances, and are impressed with objective values — wealth, beauty, social station, material possessions, etc. At puberty there occurs a marked widening of the range of ideals: historic characters, public personages, characters in fiction, and even imaginary persons replace the members of the family circle, while intellectual, æsthetic, moral, and religious values are substituted for the more material values of childhood. Moreover, ideals are evidently more vital and

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<sup>1</sup> Whipple, G. M., in Monroe, *Principles of Secondary Education*, pp. 289-92. (The Macmillan Company, 1916.) Reprinted with permission.

dynamic, more effective in motivating conduct in adolescence than in childhood.

(2) *Ideals depend on sex.* The range of ideals has always been found more restricted in girls than in boys. That is, girls tend more strongly to select ideals from their immediate environment, and share less than do boys in the broadening of the scope of ideals at adolescence. Of special interest is the circumstance that whereas boys only rarely list women as their ideals, many girls, nearly fifty per cent in fact, find their ideal persons in the opposite sex — a condition of affairs that seems particularly unfortunate for young girls at this time when ideals of womanhood should normally be developing. Here is an opportunity for women teachers to come to the rescue of their sex. In the lists of favored occupations, teaching is most favored by girls, with nursing, dressmaking, and millinery frequently cited; boys are somewhat more apt to be animated by money-making motives.

(3) *Ideals depend on home life and social station.* The children of the poor have relatively simple and 'low' ideals, and look forward, according to Thurber, to a life of hard work, with little pleasure.

(4) *Ideals depend on type of school instruction.* This assertion is an inference, however, from the fact that English and especially American children decidedly surpass German children in the range and variety of their ideals. It is possible that this outcome is due to racial or temperamental differences, but Neumann believes that it points to fundamental differences in school instruction. German pedagogy lays too great stress on mere intellectual acquisition, too little on the cultivation of personality. If this be granted, it follows that it is highly important to give systematic and definite attention in the school to the inculcation of ideals. In Germany, where formal instruction in religion and religious history is prominent, it appears that this part of the teaching has little effect upon ideals, whereas instruction in secular history, literature, and poetry is much more potent.

(5) *The variety of occupational ideals is surprisingly great.* One might suppose that certain careers would be singled out as ideal by nearly all pupils. But in some 1200 answers to the question: "What would you most like to be in an imaginary new city?" — 114 different occupations were specified.

(6) *Their alterations.* Since ideals tend to change, and to change

with special rapidity at adolescence, it is usually unfortunate if the process is prematurely arrested. Thus, a lad of 18 who aspires to be a lawyer and an orator, had at 16 an ambition to be "a pugilist and all-round sport." Had his teachers and parents not carried him past this earlier ideal, the results may well have been disastrous.

(7) *Over-ambitious ideals.* In many adolescents ideals are curiously and excessively ambitious and impossible of realization. Through them runs, so often, a social and ethical vein which impels their possessor toward philanthropic and humanitarian projects. A school teacher of the writer's acquaintance summed up her adolescent ambitions in this interesting and characteristic series: "To be the protector of unhappy women, to write the history of the world, to write novels as great as Victor Hugo's, to be an actress, to reform society, to uplift the degraded." Given such adolescent yearnings in minds of great natures, of true geniuses, they may, indeed, be realized, as the biographies of Joan of Arc, Savonarola, Lafayette, and George Eliot bear witness. Given such yearnings in mediocre and inferior, but persistent minds, and pathetic failure is the consequence. High school and college teachers will recognize readily enough this top-heavy combination of high ambition and poor ability.<sup>1</sup>

**Adolescent ambition, interests, and intelligence.** The relation between vocational ambition and the intelligence rating of 930 high school pupils was reported upon in the Atlantic City conference on Vocational Education, in 1921 (see Table VIII). When one recalls the intelligence scores made by the large occupational groups of the American Army as presumably typical for the amount of intelligence required for success in a particular occupation,<sup>2</sup> he is forced to conclude the following regarding the vocational ambitions of adolescents: (1) Pupils of mediocre mentality share freely

<sup>1</sup> The reader should here remember the psychological analysis of the attitudes, sentiments, and ideals as made in Chapter VIII.

<sup>2</sup> Yoakum, C. S., and Yerkes, R. M., *Army and Mental Tests*, p. 198. (Henry Holt and Company, 1920.)

TABLE VIII. RELATION BETWEEN VOCATIONAL AMBITION AND INTELLIGENCE RATING ON ARMY SCALE  
(930 high school pupils)

OCCUPATIONAL CHOICE	RATING ON ARMY INTELLIGENCE SCALE						TOTALS
		C-	C	C+	B	A	
	Alpha A and B	25-44 25-49	45-74 50-84	75-104 85-119	105-134 120-154	135 or over 155 or over	
Actress.....				3	1		4
Agriculture.....			3	9	17	12	41
Architect.....					3		3
Army and Navy...				3	5	6	14
Artistic career....			2	12	11	3	28
Auto mechanic....				4			4
Aviator.....				1	1		2
Bacteriologist....					1	1	2
Banker.....				1		1	2
Bookkeeper.....			8	32	16	6	62
Business manager..			3	11	4	5	23
Chemist.....				1	6	7	14
Civil service.....					1		1
Clerk (store).....			1	1	1		3
Contractor.....				1			1
Dancer (Æsthetic)..					1		1
Dentist.....			1	5	3	2	11
Dog-fancier.....				1			1
Draughtsman.....			2	5	11	3	21
Dressmaker.....					2		2
Druggist.....					2	3	5
Electrician.....					1		1
Engineering.....			2	32	62	44	140
Florist.....				1			1
Forestry.....			1		1	2	4
Home maker.....			1	1	2	1	5
Journalist.....				2	3	5	10
Lawyer.....				2	11	7	20
Librarian.....					3	2	5
Manufacturer.....				1	1		2
Milliner.....				1			1
Minister.....					1		1
Nurse.....			4	17	19	6	46
Physician.....				5	21	10	36
Printer.....					2		2
Real estate.....				1	1	1	3
Salesman (tr.)....				2	2		4
Sea captain.....				1			1
Social service....					1	1	2
Stenographer.....		2	13	65	71	25	176
Teacher.....			8	67	115	33	223
Writer.....					1	1	2
Totals.....		2	49	288	404	187	930
Per cents.....		0.2	5.2	31.0	43.6	20.0	100.0

Interpretation of army ratings: A = very superior; B = superior; C+ = above average; C = average; C- = below average.

with superior intellects in having an interest in, and choice for, a certain vocation. (2) Pupils of superior mentality often show an ambition to enter a calling making an intelligence demand far beneath their supply (for example, stenographer), and mediocrity of intelligence may aim higher than seems justifiable (teacher). These facts are, of course, inconclusive, either for the range of adolescent interests or for adolescent ability to choose the calling fairly appropriate to the mentality of the chooser. Taken in conjunction with all other such data, notably those of Book,<sup>1</sup> the irrationality of adolescent choice is shown, as well as the need pointed out for the expert guidance and counselling so fundamental in a junior high school that is really functioning.

**Adolescent traits in their volitional relationship.** Some light has been thrown upon the relationship between intelligence and leadership by the studies of Terman and Proctor, Bennett, and the army results. The first deals primarily with first-grade children; the second with adolescent boys in a vocational high school; the third, of course, with adult men. All point to the general conclusion that intelligence correlates positively and significantly with volitional powers, as expressed in initiative and leadership and acting in a manner acceptable to one's fellows. The fact that the correlations shown are not high (never reaching .50) suggests that many pupils of high general intelligence either have not the capacity for leadership, or else have not had the opportunity provided for such; also, that certain leaders may be mediocre in intelligence but strongly possessing compensating

<sup>1</sup> Book, W. F., *The Intelligence of High School Seniors*, pp. 139-42. (The Macmillan Company, 1922.)

traits of personality, will, etc. The educational problems are clear — to provide opportunity for intelligent youth to secure experience as social leaders, and to place a proper check upon the leadership of ignorance.

Downey seems to be making good progress in measuring

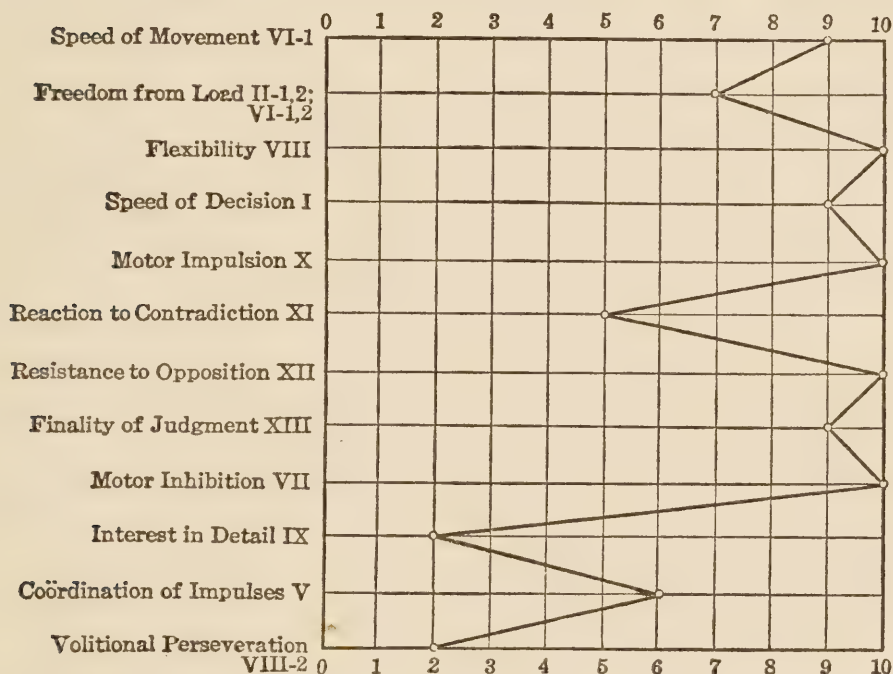


FIG. 4. CHART OF WILL-PROFILE

(From Downey's *Manual of Directions for Will-Temperament Test*)

**PROFILE X.** Profile X is that of a man who has held successfully a number of important executive positions. He is, in addition, an effective public speaker and possesses great dramatic talent.

His profile suggests, in general, the type of the successful administrator, especially with reference to the high scores for speed of decision, finality of judgment, freedom from load, resistance to opposition, and motor impulsion in conjunction with high motor inhibition.

The high score for flexibility and the medium one on reaction to contradiction (tactful response) indicate social pliability and suggestibility which increase X's social assets, but are of dubious value in his business life.

The low score on interest in detail is not a serious defect, since X is in a position to turn over to subordinates the execution of many of his projects. It goes, however, with a tendency to generalize on insufficient grounds. The low score on volitional perseverance is probably a real weakness, although X's dramatic gift makes it possible for him to achieve through imitation what others work out through prolonged trial and error.

certain factors strongly tied up with will and personality. Her Will-Temperament Test undertakes to furnish a will-profile, showing twelve specific traits, read mainly from the subject's handwriting. A typical profile is shown in Figure 4, together with the significance of the rating given in each of the traits. No one can state now how much Downey's methods surpass the "get-rich-quick" procedures of certain noted character analysts; it seems reasonable to expect that she is making a real and much-needed contribution to psychology, and that some such objective measures of certain volitional or dynamic traits will offer much assistance to the junior high school teacher in her endeavor first to predict, and then to control the behavior of the adolescent.

**Adolescence and the training of will.** Much nonsense continues to be produced regarding the training of the will, just as though the individual were competent to call forth a will element occasionally and, by giving it proper exercise, become thoroughly trained volitionally. Not that will, be it ever so narrowly envisaged and defined, cannot or is not being trained, not only in the adolescent period but by each act of life from infancy to senility. For training the will is, as has so often and so necessarily been stated, synonymous to training the entire individual. In confronting the youth with situations requiring him to learn and form new habitual modes of adjustment; in providing him with such an environment, both material and immaterial, that proper sentiments and ideals naturally are built up; finally in giving full opportunity for the proper habits and ideals to enter into the control of conduct, with unpleasant results following in case of failure — these state practically all the school or any other in-

stitution can do for the training of the will. Naturally, they add nothing to earlier formulations, for will, as the entire mind in action, involves nothing beyond the dualism upon which all response depends — the inheritance of human nature and the modifications secured through individual experience.

### QUESTIONS AND PROBLEMS

1. Is seeming *suppression* of impulses based upon the *expression* of other impulses, and not upon sheer brute repression? To root out a bad impulse, must we set some contrary impulse to work? Relate to some practical adolescent case.
2. In judging character, is the only person altogether reliable morally the one who has been really tempted and tried?
3. What are the sources of moral influence on the part of the teacher of adolescents?
4. How would you set about to develop initiative in a fourteen-year-old girl, naturally shy and retiring?
5. List typical junior high school procedures — for example, socialized recitation, or training to study, and scrutinize with reference to the training furnished in the respective fields of knowing, feeling, and willing.
6. Where do adolescent interest and desire relate to volition, as defined and treated?

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## PART IV

### PERSONALITY IN ADOLESCENCE

#### CHAPTER X

#### THE NATURE AND SIGNIFICANCE OF ADOLESCENT PERSONALITY

**The meaning of personality.** Personality, character, the self — here the reader comes to see the organism in its totality as a stimulus-response mechanism. Striven as the writer has to keep reflex, instinct, emotion and habit, knowing and volition, even consciousness and all the rest of the mental processes unified and interrelated, his method has been piecemeal. Turning attention away from the functionings of these fairly individual reaction-systems, and viewing the adolescent as an integrated being (as was exactly the point of view just developed for “will”), it becomes timely to raise such questions as how does this psychophysical organism work as a whole, how does he behave under radically new conditions, what are his more salient features of character, and how may these become disturbed or reshaped? These are some of the major questions relating to personality — the individual’s power of total response to the situations confronting him.

The term “character” suggests the individual’s way of responding to the socially endorsed construction of society — its laws, customs, morals, conventionalities, etc. It and morality in general well may be left for the moralist to dis-

cuss. The "self," as such, suggests such discussions as the consciousness of personal identity, the subject-object nature of consciousness, and the various "selves" — the Empirical Self or Me, Social, Spiritual, the Pure Ego, etc. — so reminiscent of the great philosopher, William James. But these may be left mainly to the philosopher, while the psychologist remains content with his task of treating the personality — the total potentiality of response an individual possesses for meeting life situations.

Any person feels competent to speak accurately of another's personality, yet scarcely any two would agree upon the factors they are rating. Certainly such factors as physique, temperament, instinctive tendencies, and intelligence enter in as factors in personality, but few judges carry their every-day evaluations of the other person to even such a rough degree as these four terms suggest; rather, qualifying and unanalyzable expressions are employed — "her personality is dazzling," "he is so compelling," as well as overpowering, freezing, magnetic, commanding, depressing, pleasing, etc. This is the best the average person can do, for he is not schooled to think of the individual as having all the determinants of action within him, and of these being reducible to the few simple and analyzable factors of activity so often mentioned in the preceding pages.

The study of personality. The systematic study of personality offers a great field of research for the student of adolescence, especially so as he has long since been taught that new personality-traits emerge, and that the personality becomes "set" through the adolescent period. Watson has suggested a questioning technique calculated to yield con-

crete and studiable factors, basic for any personality judgments, whether practical or scientific in character. He proposes <sup>1</sup> definite questions along the following lines:

(1) General Level of Behavior; for example, how well does the subject respond to such measures as range of information, vocabulary, use of English?

(2) General Survey of Instinctive and Emotional Equipment and Attitude; for example, how many infantile reactions and attitudes have been carried over into adult life, such as biting the nails, playing with the mouth and face, and spitting?

(3) General Habits of Work; for example, does he complete work undertaken promptly and neatly, or is he a procrastinator, a maker of excuses, and in general a temperamental worker?

(4) Activity Level; for example, can he put his work aside or must he take it with him, conversationally at least, into his social life and moments of recreation?

(5) Social Adaptability; for example, how would you rate him with respect to tactfulness, quarrelsomeness, coöperation?

(6) Recreation and Sports; for example, are there special forms of play, especially of chance, such as cards and roulette, which amount to obsessions and toward which he displays a lack of balance?

(7) Organized Sex Life; for example, has he a tendency to talk too freely about his sex experiences, or to avoid references to this phase of his life or to certain periods of it?

<sup>1</sup> Watson, J. B., *Psychology*, pp. 399-404. (J. B. Lippincott Company, 1919.)

(8) Reactions to Conventional Standards; for example, is he truthful, faithful to his work, and careful of the rights and reputation of others?

(9) Personal Bias and Peculiarities; for example, has the early petting or cruelty he has received at the hands of interested individuals made him boastful, timid, proud, overbearing; or is he generally balanced in these respects?

(10) Balancing Factors; for example, have religion and church work been for him a balancing factor — one upon which he loads responsibility and from which he receives authority, and by means of which he obtains surcease from emotional strain in times of trouble?

The inquiries of Watson, Woodworth, and others show how penetrating the questions put to the individual, as well as the impersonal observations made about his regular routine conduct, must be if the inquirer is really to know his subject's personality. Of course the thoroughness of the analysis must depend upon the individual case; for a real psychopathic adolescent no analysis could be too minute. Perhaps it is not inaccurate to state that the sanely-minded junior high school teacher can, through careful and friendly inquiry made upon the student who is finding great difficulty in "fitting in," use profitably a technique not properly preëmpted by the psychiatrist. Only by employing such objective measures as really come to grips with the reacting powers of the youth will one come to know in essential detail the facts of his character, and herein avoid the snap and inaccurate judgments all of us are so prone to make. The depths of human conduct are almost immeasurable, even though the foregoing chapters have no doubt seemed to make the pat-

tern of conduct simple. No "get-rich-quick" methods of rating adolescent personality exist, irrespective of whether such schemes involve the square chin, complexion, high forehead, scowling brows, erect posture, width between the eyes, contour of face, size of hands, or even flatness of nose. Even the magical contents of the psychologist's portfolio succeed in furnishing evidence of but a segment of personality. Hard as it may be to secure, just such thorough knowledge of personality the teacher and parent, occasionally the physician, must possess if they are to handle successfully those harder cases of adolescent maladjustment often presenting themselves.

**Personality and school conduct.** Several studies well may be mentioned as throwing considerable light upon aberrant types of adolescents:

1. *Cases of junior high school discipline.* Teachers of a small junior high school <sup>1</sup> were asked to pick out all pupils they considered to constitute disciplinary problems. The twenty pupils most frequently nominated were subjected to detailed investigation. Each teacher reported independently regarding the items of conduct she considered reprimandable. The total list of faults makes an illuminating and a very practical commentary upon adolescent personality: impudent, untrustworthy, whisperer, talks too much, giggles, uses smutty words, disturbs others, too amorous, mischievous, influenced too easily, posing, lounges in seat, loafs at work, acts babyish, thinks he's handsome, lazy, noisy, tries to be cute, disobedient, lawless, bluffer, draws

<sup>1</sup> Fuson, H. H., from an unpublished research upon the Covington, Kentucky, Junior High School, on file at the University of Cincinnati

attention, truant, silly, asks foolish questions, cuts periods, surly, smokes, frivolous, careless with books, loud laughing, member of gang, indifferent, irrepressible, bad study habits, thinks he's intelligent, exaggerated idea of own importance, dodges work, idles, mutters, rude, trifling, "Smart Alec," and paints and powders excessively. Data were secured, for the twenty disciplinary cases, regarding chronological and mental age, number of years spent in the present school,

TABLE IX. SHOWING VARIOUS RATINGS OF PUPILS LISTED AS DISCIPLINARY CASES

GRADE	CHRONOLOGICAL AGE	MENTAL AGE	YEARS IN THE SCHOOL	AVERAGE DEPORTMENT	NO. NON-PROMOTIONS	HEALTH	HOME CONDITIONS
7B...	16-4	10	10	70	6	G	F
8A...	16-5	12	11 $\frac{1}{2}$	75	4	F	B
8A...	13-4	12	1 $\frac{1}{2}$	80	0	G	G
7B...	12-8	12	1 $\frac{1}{2}$	70	0	G	B
7B...	15-6	11	11 $\frac{1}{2}$	65	5	G	B
7B...	14-9	9	10 $\frac{1}{2}$	70	4	G	F
7B...	15-6	12	1 $\frac{1}{2}$	70	0	G	F
8A...	18-1	12	5 $\frac{1}{2}$	77	1	G	G
8A...	14-6	12	8 $\frac{1}{4}$	77	1	G	B
7A...	14-3	12	3 $\frac{1}{2}$	80	0	G	F
8B...	13-6	16	7 $\frac{1}{2}$	80	1	G	G
7B...	15-2	11	8	70	4	G	F
8A...	14-9	13	1 $\frac{1}{2}$	85	0	G	G
7A...	13-5	13	7 $\frac{1}{2}$	77	2	G	G
8A...	15-5	14	2 $\frac{1}{2}$	76	0	G	B
7A...	15-8	11	10	76	5	G	B
7B...	16-0	11	10	77	7	F	B
8B...	15-1	13	3	80	1	G	G
8A...	13-4	16	8	88	0	G	G
8A...	14-4	10	8 $\frac{1}{2}$	80	2	G	B

number of promotions and non-promotions to date, etc., as shown in Table IX. Interesting and significant deductions may be made as follows:

(a) Disciplinary cases among junior high school pupils show, almost without exception, a bad non-promotion record before entering the junior high school.

(b) Misconduct is not the exception, as witnessed by the large number of items reported.

(c) Although the data were inconclusive, there is no guarantee that the bad pupil is necessarily feeble-minded, over-age, poor in health, or comes from bad home conditions.

2. *Diagnosis and treatment of school failures.* Woolley and Ferris<sup>1</sup> have recently shown, after a long period spent in studying school failures among young children especially, that the failures can be grouped according to the dominant cause of the difficulty, as follows: (a) Children who were neglected especially at home; (b) high-grade defectives, though their intelligence quotients were still above the usually accepted limits for defects; (c) those with special defects which seemed to make the acquisition of a given type of knowledge unusually difficult; and finally, (d) the psychopathic. With reference to the general mental tone and attitude of the pupil, they point out the weighty consideration necessary to give to: (a) mental distraction due to anxiety, caused by poverty, constant quarreling or immoral behavior of parents, divorces, or cruelty to children; (b) personal conflict between the child and his parents, or between the child and his teachers; (c) obsessions or fears; (d) special disabilities; (e) character defects, such as excessive shyness or abnormal stubbornness; and (f) psychopathic conditions.

<sup>1</sup> Woolley, Helen T., and Ferris, E., *Diagnosis and Treatment of Young School Failures*. (United States Bureau of Education, Bulletin 1, 1923.)

Projected against the psychological laws, stated earlier, regarding habit formation in relation to instinct and emotions, as well as the facts of "thwarting" so emphatically stated, it is easy for the student of adolescent behavior to see how the accumulated experience of pre-adolescent life, both in and out of school, largely make the adolescent misfit; and to agree quite largely with the following conclusion:

It is not too much to say that if every child could be adequately studied and education really adapted to the needs of the individual child, most of the problems of vice and crime would disappear. Children are spoiled in the making in ways that we see and understand, and yet at present we stand and look on, powerless to prevent the havoc, not so much from lack of knowledge as from lack of resources.

### *3. Magnitude and rate of alleged changes at adolescence.*

The two preceding investigations have tended to show that, in so far as adolescence is a period of "storm and stress" as reflected in unfortunate school adjustment, the conditioning factors lie far back in early school, family, social, and personal history. Just how much the adolescent period is truly one of radical shake-up for all youth is still open for answer. Thorndike has employed the post-mortem questionnaire method somewhat more scientifically than earlier investigators, and secures findings quite in contradiction to those usually phrased.<sup>1</sup> He concludes as follows:

It seems, therefore, fair to say that of the twelve matters studied, only interest in vocations, friendship, reforming zeal, and love of solitude are specially characteristic of adolescence. These have their acme at eighteen, twenty, eighteen, and eighteen. The maximum of selfishness comes before and that for unselfishness comes

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<sup>1</sup>Thorndike, E. L., "Magnitude and Rate of Alleged Changes at Adolescence"; in *Educational Review*, vol. 54, pp. 140-47. (1917.)

after the years from fourteen to twenty-two. So, also, with desire to do one's duty, love of nature, and love of reading.

We must conclude then that the intellectual and moral picture of the high school boy as breaking loose from home allegiance, full of vast enthusiasms, perplexed and tender in conscience, and the like, is likely to prove truer of the college boy. The picture of these changes as occurring so suddenly that the youth is a mystery to himself, seems true of no age.

The general picture presented by the above, and many other studies made, suggest what are no doubt the facts:

(1) A turbulent and cataclasmic career so long deemed potential for all adolescents is often a matter of exaggeration.

(2) Aberrant cases frequently occur in school, the conditioning factors generally antedating adolescence and being largely preventable.

### QUESTIONS AND PROBLEMS

1. Select twelve acquaintances, and rank them with respect to the possession of a *good* personality, and analyze the real factors entering into your judgment.
2. May personality be dissected, as suggested in this chapter?
3. What is meant by training for the development of one's personality?
4. Attempt to verify, in your own experience, the conclusions reached by Thorndike regarding the alleged shake-up of adolescent character.
5. Select a case of high school discipline, and see to what degree the factors conditioning it: (a) antedated adolescence; and (b) were preventable.
6. May personality, as the I.Q., be thought of as remaining constant from year to year?

## CHAPTER XI

### DISTURBANCE OF ADOLESCENT PERSONALITY

It has been shown that adolescence is a period of complexity, instability, and variability, and that, while perhaps the large majority make the shift from boyhood to youth without passing through a period of "storm and stress" reaching down to the basic fundamentals of character and conduct, pathological conditions often appear and radical disturbances in conduct result.

#### *1. Pathology of adolescent mentality*

The mental diseases of adolescence present an interesting, even though an unhappy and incompletely drawn picture. Certain conditions and major types may well be commented upon.

**Amentia versus dementia.** Comment has already been made upon the fact that approximately the  $14\frac{1}{2}$  year marks the average maturity of general intelligence; also, that a large number of individuals have reached the maximum of mental growth before this age for average maturing. The term "amentia" suggests this failure to develop, generally from birth on, and hence the picture presented is that of arrested development. The terms "feeble-mindedness," "idiocy," "imbecility," "morosity," "low I.Q.," "mental retardation," etc., suggest the typical condition connoted by amentia — the individual has had little or no mind with which to start.

Dementia literally means a subtraction from a mentality apparently normal up to the time of arrest. While dementia may presumably be expected during senility, its occurrence at an earlier period, especially during adolescence, marks it as a pathological condition of major importance. This precocious dementia (*dementia præcox*) constitutes the most serious psychosis to which adolescence is liable.

**Organic versus functional diseases.** Advanced students of adolescent pathology seem to be having marked success in correlating the several types of mental disability — amentia as well as the insanities — with definite organic conditions, the general tendency being to postulate that no abnormality of mental functioning appears without some pronounced physical condition. So much is known regarding certain diseased conditions of brain structure sometimes present even at birth, toxic conditions acquirable, improper structure and functioning of certain endocrine glands, etc., as well as malnutritive conditions of nerve cells otherwise normal as to lead the student to think of mental abnormalities as closely related to definite organic conditions. On the other hand, it is hard to “run to earth” as yet certain adolescent mal-functionings for which there can be demonstrated no pronounced lesion. Here may profitably be mentioned *dementia præcox*, *hysteria*, adolescent *phobias*, all sorts of automatisms and habit faults — all of which could be much easier eradicated were there some known and remediable organic basis.

**Major types of adolescent pathology.** We shall mention here the more important types of mental pathology of adolescence:

(1) *Dementia præcox*. This is peculiar to youth, and is a slow decline of mental strength through a gradual weakening, primarily of the volitional and emotional life. It suggests an incapacity to make a reconstruction of attitudes, interests, and ideals so necessary, and generally quite normal for adolescence. It shows little relation to intelligence, as the disease often attacks adolescents of marked intelligence and promise.<sup>1</sup> While most frequent for later adolescence, the condition may appear at any time during the period. The symptoms may be varied — persistent lack of interest, listlessness, unwillingness to engage in normal physical and intellectual activity, day-dreaming, as well as pronounced “attacks,” such as maniacal excitement, melancholic frenzy and depression, catatonic (bodily rigidity), stupor, mentally confused, delusional, and hallucinational. Periods of marked improvement are generally followed by subsequent attacks, until finally permanent degeneration and disorganization of mentality results.

The sources of *dementia præcox* are quite likely to be found in the unusually rapid growth activities of adolescence, special temperamental make-up of certain individuals, pre-adolescent training, perhaps in some instances a disease-heredity. Precipitating causes are for the most part those of exhausting influences, both of mental and physical strain, although a small proportion of cases occur in the physically strong and apparently stable and socially inclined.

(2) *Hysterias* suggest a functional disorder occasionally

<sup>1</sup> See Stedman, H. R., *Mental Pitfalls of Adolescence* (Massachusetts Society for Mental Hygiene, Publication no. 22), for a thorough discussion of *dementia præcox*.

prominent in adolescence. In a certain sense this type contrasts with dementia præcox, as the former generally is characteristically of an extreme emotional tone, while in the latter an almost total annihilation of both the emotional and volitional life may appear. Hysteria may be characterized by general mental changes, anæsthesias, paralyses, contractions, a vast complex of visceral disturbances, hence frequently simulating organic disease. Age is an etiological factor, as shown by the following for a large number of cases investigated: 1-10 years, 8 per cent; 10-20 years, 50 per cent; 20-30 years, 28 per cent; 30-40 years, 10 per cent; 40-50 years, 3 per cent; 50-60 years, 1 per cent. The female sex is more frequently affected than the male (20 : 1), and hysteria is often considered as resulting from mental derangement of the sexual life (hence the Greek "hysteron" — womb, uterus). The symptoms may be general; for example, inability to control temper, and susceptibility to temper, tears, laughter, or extreme self-consciousness. Special symptoms may involve a hyperacuity of the senses, complete loss of sensations, narrowing of vision, anæsthesias not following the distribution of the sensory nerve, paralyses not producing the atrophy characteristic for the organic types, tics, convulsive seizures of great violence (hystero-epilepsy), even at times a specific dissociation of a body of mental content from the parent mass of mental experience. This last symptom suggests the entire psychology of dissociated consciousness, cut-off and alternating personality, suppressions to the subconscious, etc., later involved in a discussion of Freudian psychology.

To theorize regarding the hysterical conditions to which

the adolescent seems potential offers interesting speculation. Janet holds that the hysterical subject has, owing to some intrinsic neural instability, narrowed his field of consciousness in a way analogous to its narrowing in hypnotism; that, under this condition, the subject doesn't think of the other items of his experiences. Freud would emphasize that the hysterical symptom is a memory symbol of certain traumatic (psychic shock) impressions and experiences; the expression of a sexual phantasy and a substituting wish-fulfillment for sexual gratification; that the symptom arises from a compromise between the sexual impulse and social, ethical, and æsthetic motives, all working to disguise the true significance of the attack.

(3) *Automatisms* carried over from pre-adolescence may appear in marked degree. Over a hundred of these nervous faults have been catalogued, such as stammering, biting the nails, trotting the leg, picking the face, clearing the throat, facial gestures, wrinkling the forehead, drawing down the mouth, tics, etc. These suggest dissociated activities, presumably involving the use of the smaller muscles and indicating a lack of control and coördination. In so far as these may be the natural results of an unfavorable psychology of learning of pre-adolescence — specifically, where the finer accessory movements have been kept in the foreground to the neglect of the fundamental — it is reasonable to expect that, during the rapid adolescent growth of the fundamental muscles, the nervous automatisms of pre-adolescence may, through adequate educational treatment, receive proper although delayed organization in the large habitual hierarchies. In so far as these automatisms, tics, and other mani-

festations of nervousness receive correction through such incorporation, by the general improvement of the body through better habits of eating, sleeping, exercise, etc. — perhaps to a degree through elimination of the traumatic condition of which they may at times be the survival — marked improvement may often be noted; failure herein brings the final stage of chorea.

(4) *Fear psychoses* occasionally appear to a strong degree in adolescence. These often taking a turn dictated by a perverted use of the sex functions. The customary preachments of elders regarding the dire consequences of such abuses, mental as well as physical, often contribute to develop a condition close to insanity regarding a widespread practice at least among adolescent boys. The social frowning upon the sex life in general has often naturally developed untold misery, since the youth in his untutored ignorance tries to reconcile his sex impulses, dreams, etc., with fancied moral instead of biological principles. The escape mechanisms furnished by religious phenomena and practices, zealous social work, etc., are probably at times to be understood best in the light of the fears, anxiety neuroses, search for self-respect, etc., natural to the adolescent. Instruction in sex hygiene has a real mission to perform herein.

A “storm and stress” period. The above-mentioned types of mental pathology of adolescence go a long way to characterize the period. Adolescence demands a radical reconstruction of interests, attitudes, and desires, as natural resultants of the rapidly expanding internal powers of the organism and the enlarged environment in which it is forced to move. This reconstruction is far more emotional and

volitional than intellectual, as the analysis of the gross types of inability in making adjustments listed above has shown. Complete and entirely socially adapted action fails to be attained, rival instinctive and habitual systems clash, and weaknesses of personality, character, and morality emerge — all of which lead to characterizing the period as one of “storm and stress.” The thwartings discussed in an earlier chapter find full reference and illustration here.

The real student of adolescence should give the mental pathology of adolescence its full significance, yet without blinding himself to the fact that the vast majority of adolescents, given a sane educational and home environment preceding and during the period, reach maturity without encountering the tragic conditions portrayed by this chapter. Adolescent insanity, as a more or less prolonged and marked departure from the individual's mode of thinking, feeling, and acting, and resulting in a marked lessened capacity for adapting to the environment, should be, and generally is found to be, the exception rather than the rule.

## *2. Adolescent pathology and Freudian psychology*

The reader has gradually become prepared for a discussion of Freudian psychology. The rôle of the instincts in reaction and their relation to habit-formation, their control and direction; the thwarting, suppression, and conditioning of emotional responses and desires; finally, the description furnished for dementia praecox, hysterias, fears, automatisms, etc., have prepared one for a discussion of the subconscious mind and a descent into its interesting although at times repellent depths. A brief statement of the Freudian belief offers a field of unlimited interest and explanatory possibilities.

**The Freudian beliefs.** The deeper and most significant part of mental life does not consist in the controllable processes of consciousness, but rather in the realm of the sub-conscious, so one would be led to believe. To this zone go all ideas when they are not functioning in the focus of consciousness. Here are relegated not only all stored-up experiences, but all suppressed desires, potential incitants to activity, sex longings and strivings — in fact, consciousness is a taskmaster and permits only a very narrow selection of items to function in its limelight. A mental censor is developed through experience, and this censor keeps under control all tendencies, however natural and normal, from entering into conduct which have not become incorporated into the acquirements endorsed by the moral, social, religious, and æsthetic schema of modern life.

Yet these suppressions do not become frozen, static, or annihilated. Rather, they live on, grow, integrate, ripen, and in due time come back to influence conduct, practically always sexual in essence, although generally disguised in symbolic fashion. In the dream state the censor is absent, so this is the period par excellence for suppressed sex desires to play their rôle, symbolically clad or otherwise, and furnish the organism mental, and at times, physiological relief. Or to slip by during waking hours, and bring the slip of the tongue or the pen, perhaps even to produce a temporary suspension of conscious control and engage the organism in automatic writing or speech. Even to give the flights of fancy, inspiration, revelation, productions of art or literature, the so-called instantaneous religious conversion, even the hysterias and alternations of personality — all the end-results of

subconscious activities largely sexual in character, and now sufficiently matured and integrated to affect conduct, either directly or indirectly, in natural or symbolic guise. However, the submerged "complex" may not be so open in its power to influence conduct, but as a complete suppression may disturb the normal conduct even to insanity, except that through psychoanalysis this submergence — often a childish fear or thwarted sex desire — may be brought to the surface, faced in the light of consciousness, tied up with the normal life, with the "cure" resulting.

**Criticism of these beliefs.** This statement, homily in character, is typical of the average description given to a psychological system seeming to offer unlimited values in explaining all adolescent phenomena, normal and pathological, and even to encourage the setting-up of unsuspected behavioristic and mental phenomena so they may be explained. For Freudian psychology has proved to be a veritable Monroe Doctrine, and under its explanatory categories its adherents easily bring to rest all mental operations, normal no less than abnormal. This is not the place to essay a full discussion of the psychology of the subconscious — better, the non-conscious — and to bring it into clear perspective with the remaining powers of mind.<sup>1</sup> It is necessary, however, for the

<sup>1</sup> The writer hopes to publish soon a series of chapters on the Non-Conscious and its Educational Import. Herein will be developed the historical background of the conception, and its significance shown not only for the typical operations of both the mental and physical life, but also the quite typical operations of memory, thought and reasoning, volition, language, motor and ideational learning, as well as conduct and morality. The educational utilization of the governing laws and principles seems not only possible, but extremely valuable. Needless to say, the proposed treatment is being developed without making an extravagant borrowing of the far-fetched sexualism of the Freudian type.

reader of these pages to secure the following views, were such a discussion made:

(1) Many human operations daily employed are strictly unconscious, and require no extravagant postulation of a subconsciousness.

(2) The phenomena of split-off, secondary, and alternating personality, etc., represent the possibilities of neural dissociation within the elaborate areas of the cerebral cortex, and, in the strict terms of psycho-physical parallelism, furnish the suggestion of two or more streams of consciousness flowing simultaneously in the same individual, herein making unnecessary a set-up of the subconsciousness entity.

(3) The sex instinct does not seem to monopolize all life tendencies, as by no stretch of imagination does it seem possible to restate fairly certain individualistic and altruistic urges in a sexual way.

(4) Many activities in both the normal and dream consciousness lack sexual implications.

(5) Thwarted desires, whether growing out of instinctive or habitual tendencies to behavior, rarely become wholly suppressed, but return to consciousness again and again until they can be acted upon.

(6) Sex urges, or other instinctive urges, suppressed or otherwise, play a prominent rôle in "short circuiting," setting up conditioned reflexes, effecting "sublimations," etc., as developed so fully in the discussion of emotions; but the part played is the preliminary one of linking the response to the stimulus, and no claim can necessarily be laid for the subsequent development of the complex activities often resulting. That is, the adolescent may become sexually drawn to

*Venus and Adonis*, and thence may result a study of all Shakespearian drama, even a literary career, and it is doubtful whether the original sex wish ever functioned except in the initiatory stage of linking the sex response to the original reading stimulus.

**Dealing with the maladjusted personality.** From the above survey of the mental pathology of adolescence, the reader has come to see that the maladjusted personality has elements in his make-up of which he is often not aware; that a knowledge of these dissociated or poorly functioning elements often is the necessary starting point toward socializing the personality; that normal social adaptation generally results under frank and honest treatment given the adolescent; that abnormal types generally reflect the acquired maladjustments of pre-adolescence, for whom a careful regulation of environmental conditions, physical and mental hygiene, and perhaps at times the Freudian therapeutics may be necessary, if the arrest to normal adolescent development is to be removed.

### QUESTIONS AND PROBLEMS

1. What is insanity? Feeble-mindedness? May a feeble-minded person become insane?
2. Make a list of automatisms frequently occurring during childhood, and undertake to explain how these became started. Propose the proper educational treatment.
3. How may fear psychoses be dissipated?
4. Look up the psychoanalytic method, evaluate it, and consider whether it offers anything by way of suggestion to the teacher.
5. Relate the activity of the subconscious to such facts as: solving a problem overnight; it pays to distribute rather than mass practice in learning; cramming for an examination is generally inadvisable.
6. What is the subconscious?

## CHAPTER XII

### THE MORAL AND RELIGIOUS PERSONALITY

It is commonly held that the child is neither moral nor immoral, but that he is unmoral. The years of pre-adolescence bring a slow development of the moral sense, with adolescence being the period where the life of morality grows rapidly. Here is the time when the youth becomes relatively set as a moral or immoral being. As a moral being, recognizing of course the relativity of the term, he comes to entertain a sense of right and justice, to respect the privilege and property of others, and to make the endorsements of his group function in the control of his own conduct. The immoral youth fails to fit in with the demands which the community as a whole agrees as necessary for its membership, and criminality results.

**Criminality and adolescence.** That adolescence may be a period for marked criminality goes almost without saying. With impulses and almost newly-found emotions bringing at times an upheaval of personality and the poorly developed moral life; with the adolescent facing countless new situations and stimuli in the rapidly expanding social environment; with the old authoritative moorings of childhood naturally cast off, and the new ones of adolescence quite unattained; with parents and teachers often failing to help with the moral conflicts the adolescent may be enduring; with the occasional abnormalities of arrested mentality discussed in the preceding chapter; finally, with the adolescent some-

times receiving his education for moral growth from the only group into which he seems to find himself fit (namely, the gang), instead of through socially endorsed channels — it is not surprising that the period of adolescence becomes critical for the appearance of criminality.

There naturally result two main classes of adolescent criminals: (1) the criminals by inheritance, where native qualities render them anti-social, these including the typical hereditary degenerate; and (2) the criminals by circumstances, wherein the environment (industry, financial need, lack of parental control, opportunity for bad companions, lack of occupation, etc.) may help to render the adolescent a criminal even though his mental powers have been entirely normal.

Either type, whether individual or social, is likely to appear as a more or less normal phase of the mental and moral adjustment so characteristic of the period, and, while the writer does not want to condone the all too typical sowing of "wild oats," it does need to be emphasized that many of the character faults of boyhood and early adolescence rather naturally become met and mastered through proper school treatment, and that much of the moral delinquency seen in adolescence need not, and generally does not, eventuate in confirmed criminality. Nor does this mean that lying, stealing, maliciously damaging property, indulging in cruelty, improper sex activities, and other criminal tendencies are to be winked at. These and all other violations of group sanctions merit and require group disapproval and punishment.

**Moral growth and training.** Someone has aptly stated that "the school is even open to the accusation of giving as-

sistance to the making of criminals through sheer boredom imposed upon adolescents." So long as no provision is made for the exercise of interest, little can be expected; the best results would come from fusion of the activities of the school with the tendencies which, uncontrolled, express themselves in the hooligan gang.<sup>1</sup> The resources possessed by the school for moral training are gigantic in scope, even though these are scarcely in their infancy of utilization. The moral activities engaged in by pupils in a junior high school worthy of the name — direct moral instruction, the moral values in the various studies of literature, composition, foreign languages, art, history and civics, geography, science, household and industrial arts, mathematics, even physical education, employment of the feeling life and other native or acquired promptings, and finally, religious education itself — suggest the educational possibilities for genuine moral training.<sup>2</sup> Mr. George, with his *Junior Republic*, has pointed out the principles underlying the improvement of adolescents possessing criminal tendencies, these having to do quite largely with furnishing the wayward one a real position of opportunity and responsibility in a group which he himself helps to constitute and control.<sup>3</sup> Jane Addams, in her broadly interpretative *Spirit of Youth and Our City Streets*, has emphasized that "recreation is stronger than vice, and recreation alone can stifle the lust for vice." With the social, industrial, and

<sup>1</sup> Slaughter, J. W., *The Adolescent*, p. 80. (George Allen and Unwin, Ltd., London, 1911.)

<sup>2</sup> See Neumann, H., *Education for Moral Growth*, chaps. XI-XVII, for the sanest and most helpful discussion available for this very difficult topic. (D. Appleton and Company, 1923.)

<sup>3</sup> See Whipple, G. M., in Monroe's *Principles of Secondary Education*, p. 296. (The Macmillan Company, 1916.)

educational environment organized to give the adolescent opportunity toward full moral development, and especially with the adolescent school making the most of its opportunity, there is good reason to expect that the vast majority of adolescents will safely adjust to the enlarged social schema into which they must grow, and toward problems of which they must learn to adjust in ways carrying social approval.

**The religious personality.** In the development of adolescent personality — the total potentiality of response an individual possesses for meeting life situations — the religious aspect plays a prominent rôle. Lancaster, Starbuck, Coe, Hall, and others have shown that, if the statistics of conversion be plotted, the curve rises irregularly through the early teens, reaches its highest point at sixteen, then falls irregularly toward maturity. Furthermore, Lancaster reports that experiencing a religious crisis akin to conversion tends to be almost universal, since 518 of the 598 young people investigated were ready to admit having faced the experience. Interesting to note, the high point of the curve is nearly coincident with the age at which the adolescent crime-curve is commonly held to reach its apex, namely, about fifteen. Finally, further connection should be noted with the average maturing of general intelligence, as discussed in Chapter VII. It would seem to appear, therefore, that the middle teens — specifically, the period presumably set, on the average, for the termination of early adolescence and junior high school instruction — marks the maximum strength of the inner energies so typical for the adolescent, and that all mental forces — intellectual, emotional, volitional, moral, and

spiritual — are operating at a maximum, potential for good or evil.

The causes for the rapid development of the religious personality are not far to seek, as they do not take the psychologist away from his general thesis that all the determinants of action are within the individual, and are reducible to the few simple and analyzable factors of reactions so often mentioned in earlier pages. This postulates no specific instinct of religion coming into play at adolescence or any other life period, nor does it give place for registering the touch of the Divine considered so fundamental in certain theological systems. Rather, with the gradual accumulations of experience; the maturing of the sexual and social instincts and their attendant emotions; the often described readjustment process toward life; the necessary transition from egoism to altruism, developing the heliocentric (social) in rivalry to the fairly egocentric (individual) attitude; and finally, as a natural result of securing all sorts of conditioned ways of responding and perhaps in the development of "escape mechanisms," the adolescent often becomes "converted"; that is, he definitely decides *to turn from* the older moorings of self-love and self-interests and even sin and seeks to revamp his life in keeping with the conventionalized pattern set by formulated religion and approved by the older members of his social group. That merely making the decision to turn and giving it public confession do not and cannot radically modify at once the reaction system the adolescent has been a good many years forming, and that a period of doubt and skepticism regarding the implications of his decision subsequently and normally arises, are facts clearly known to the student of human

behavior, even though theological implications may urge otherwise. Conversion and doubt, as the crucial aspects of the religious aspect of adolescent personality, are both biologically determined. The known facts well may be set forth.

**The psychology of adolescent conversion.** Shorn of all the conventionalities set up by organized religion, the following seem true statements of what is really psychologically justified regarding conversion:

1. Conversion, with all its "seriousness, its fears and distresses, its crises, its sense of personal need, either in the way of deliverance from bondage and fear or in the way of help in attaining to some higher realization, its emergence out of darkness into light and calm, with the clear conviction of having passed from a state of perdition to a state of salvation," tends generally to be much more in the nature of gradual growth than an instantaneous and miraculous paroxysm.

2. In the occurrence of the latter type, the explanation is found in the known facts of the slow accumulation and maturing of experience, presumably often carried subconsciously, the sudden-decision aspect being, like so many other decisions, the appearance as the end-result of a long process of mental growth and often called out, as so many moral decisions are, by a situation largely emotionally toned.

3. The essential religious decision may be rationally arrived at without the attendant pyrotechnics so often considered essential steps attendant upon saving one's soul. Struggle and the thrill of victory herein appear to be absent.

4. Conversion may or may not function long in controlling conduct, the converttee becoming permanently regener-

ated or the godless backslider, as the case may be, since the religious decision, in agreement with all other important registrations effected by the self, requires integration in the entire acting equipment of the organism to be rendered permanent for controlling conduct. "Once in grace" may argue little for psychological permanence. Needless to say, securing formal church membership, subscribing to and participating in sacramental routine, securing situations for acting upon religious promptings, etc., help to engrain the conversion and keep it upon the conventionalized pathway prepared for it.

5. The psychology of emotion, with its emphasis upon the deep-rooted character of the instinct-emotional unity, attachments and detachments, and the development of sentiments and ideals, especially with its emphasis upon the sexual as the physiological basis of much if not all the higher and finer qualities of personality, whether ethical or spiritual, gives explanation not only for much of the formation, but is the main guarantee for permanence of the religious life.

**The psychology of adolescent doubt.** The preceding paragraphs have sufficed to show the essentially biological character of that aspect of the religious experience commonly known as "conversion." The period of skepticism or doubt should grow naturally out of the conversion phenomena. The causes of adolescent doubtings are easily stated. First, adolescence is essentially a period of mental expansion, and mental energy is turned quite naturally to the scrutiny of many things heretofore taken for granted. Second, many childish teachments are corrected through the normal experiences of school instruction, and probably a slowly forming

general tendency to doubt many hold-over childish ideas is bred in the correction of the various Santa Claus explanations which parents, Sunday School teachers, and others have given in answer to the curiosity and credulity of childhood. Third, the data of scientific instruction no doubt often undermine childish foundations without being able shortly to replace them with a better structure. Fourth, the adolescent discovers that conversion has not solved at a stroke his moral difficulties, and that the struggle with the world, the flesh, and the devil still is on. Fifth, he sees too often what he thinks is the unchristianlike conduct of supposedly Christian adults, and, in this state of disillusionment, comes to believe he has built for himself merely a house of cards. Lastly, before the sweep of his own so-branded immoral urges, he may try to get away from his religious subscriptions by seeking to disbelieve them, for the adolescent seeks essentially to be honest with himself.

It is entirely natural, therefore, that most adolescents doubt the teachings normally furnished by the church of their faith, and raise questions of deep moment; for example, is God existent and personal; is there heaven, hell, and eternal punishment for sin; is Jesus the physical son of the Father, and born of a virgin; are the miracles, the resurrection, ascension, salvation by grace, etc., *bona fide* phenomena; is there a soul, is it immortal, and may it be saved or lost; is Deity a power for both good and evil in human affairs, or is He impotently sitting on His throne and watching the mechanistic cause-effect happenings; and where did the world and all that is therein come from, anyway, and why? Let the reader not be misled, however, in believing that this

adolescent doubting is restricted to the youth's religious life, for doubt as an attitude is functioning regarding moral, social, vocational, and other fields of activity. Neither should the reader be misled in thinking that all adolescents undergo the experiences of skepticism, for, just as in some cases the youth may gradually build up the character and habits marking the Christian without the conversion crisis, so many a young Christian has never had his complacency disturbed, and, living his life in a circle of small mental radius, has a peace scarcely worthy of comparison with that secured through doubt and the resulting intellectual reconstruction. Still again, the reader should not think that the high school youth may not be safely led, thoughtfully and rationally, to adjust his earlier views in the light of his new contacts with science, human problems, and the broadened zone of activity generally.

**The needs of the adolescent.** This is not the place for a discussion of religious training, but the writer cannot avoid stating that the adolescent does not need anchorage so much as he needs the open sea; that he needs at last to have his religious beliefs grounded in his own thinking; that he needs to be allowed honesty with himself, to the end that, like the savage, he may unite his science and religion; and that he may differentiate between the man-made religious elements constituting the débris-like accumulations of the centuries and the few essential facts defining the God-to-man relationships which, when entering in for the control of conduct, will make a difference for individual and social good, and constitute values because of the service rendered in meeting the needs of the organism.

*The stimulus-response hypothesis as illustrated by religion*

The two preceding discussions have aimed to give psychological foundation to the moral and spiritual forces of personality generally considered quite elusive and intangible. In continuance herein a few closing paragraphs may suffice to bring the reader back to the stimulus-response hypothesis considered fundamental to this entire treatise and, with the religion personality as the primary illustration, give a point of view general enough to apply to all major situations and problems faced by youth. This will involve a deeper analysis of the psychology of religion than is normally justified in a popular treatise.

Let the reader approach the problem from the standpoint of biological evolution. The metaphysics of the matter need not concern us here. The reason the adolescent comes ever to form any concept of deity, the conditions under which this concept proves inadequate, what difference this concept makes as a working force in the actual life of man, what values certain bodies of knowledge have for the meeting of problems — these are questions that immediately appear.

*Life as an influence.* If the psycho-physical organism were capable of meeting all difficulties as they arose, or if the organism dwelt in a world where trial had never to be faced or need never to be felt, no concept of God would ever be formed. There is no instinctive basis or religious germ within the protoplasmic self. The belief in God and his willingness to help depends solely upon the way man has to live his life. If life conditions are easy, and the organism has little or no difficulty in solving his problems, the god-concept is scanty, provided it is even existent. But as soon as need arises, as soon as equilibrium of the organism is violently disturbed, as soon as the terrors of darkness and the arrows of noon-day oppress one's tranquillity of spirit, as soon as the enweared is preparing to loose his bark for the voyage into the impenetrable

shadows of an apparently undying night — then God arises. A god is the noblest work of man, and man's attention is turned toward the task of god-building when such a construct is the only altar to which he can carry his burdens, where he can gain renewed hope and strength for the burden bearing and where, if he cannot find aid for the task, he can trust his all and rest, with the confident belief that the Unseen will make all things to work together for good.

*The god-belief arises*, thus, in the face of need. This concept, in so far as it involves ideas of love, assistance, gratitude, and fear, possesses these only because the builder has known what it is to love, to give and receive aid, to feel hate and experience gratitude, to tremble with fear before a superior earth power. Because of need the god is called into being; out of human experimental data the construction is made; god's function is to aid us in solving our problems.

When difficulty resolves and the organism is again in tune with himself and his environment, the problem-solving god would be no longer needed were it not for the fact that the human being is dynamic, constantly striving, constantly meeting new obstacles, and finding new and greater problems emerging out of each new solved situation. Paradoxical as it may appear, the more the problems are solved the more new and greater ones arise; the more the god aids man to do his work, the more foundation is laid for the superstructure of mightier tasks. Unrest is the price one pays for living in a world where need is rife and problem can be met. The prayer for peace is not the petition of a healthy soul. If peace is completely attained, then will the job of the god be no longer existent. A millennium may be just such a peaceful condition, in which without problem, without strain, without god, man may rest.

*Three conditions may maintain* as between man and his problems. When the organism is confronted with a situation, perhaps his experience has been such that he has the solution ready at hand. In this case, the stimulus is no greater than the energy available for the task. No problem in the true sense of the word emerges. Or the difficulty may be great, the odds too heavy. Nothing in experience can be called upon to handle the obstacles. Old ways of reacting break down. Here problem is seen and here the help of the god to act as a spur to face the matter and fight through the difficulties is sorely needed. Here is the foundation head of true

religion. Or, thirdly, the situation may not prove a great task for the organism. Perhaps a reservoir of strength has been formed, this equal to the emergency and some to spare. Situation creates no problem here; problem exists, but it is the problem of satiety, the problem of finding outlet for energy rather than the creation of insufficient energy.

*Three forms of religion.* Out of each of these three possible life situations a form of religion is evolved. In the first case, we have mysticism, where the soul finds himself at peace with God. With his eyes uplifted to deity and his attention turned away from his brother and the problems of life, the mystic finds temporary happiness. He walks with God and is one with him. In the second case, we have redemption. Here the oppressed soul is willing to grovel in the dust, to make any sacrifice, to adopt any device if only his evil can be met. And here the cry goes out for a daysman to place his hand upon the drooping shoulder of the sin-troubled pilgrim and point the way to that source of all things helpful. But in case three, conditions seem reversed. Here the individual's religion is not one of close communion with the divine, nor is it one of a search after redemption. It represents where surcease from care has come and the soul so strong that it can go out and expend much energy in aiding others in their struggles with evils. Selfishness, fear of personal danger, self-satisfied inner-living — all are gone.

These various stages are not clear-cut in the individual life. They are neither permanent nor mutually exclusive. The soul crying out for redemption may have his petition answered and be for a time so drawn into harmony with the supernal as to walk the path of mysticism. Likewise, the moralist may have his mystical moments. In fact, one is inclined to believe that redemptive religion may function as the transition stage into the religion of morality, for the soul that has truly found itself yearns to work, seeks a job, reaches for danger, courts disaster. However, the same line of conduct, viewed pragmatically, may obtain without the individual having consciously gone through the redemptive stage. By a process of steady, experimental development he may have come to get a true view of brotherhood and function just as valuably to serve, to disperse energy, to attain equilibrium as his commonly considered more religious brother. But this equilibrium from the consciousness of task well done represents a different type of satisfaction from that of mysticism. In this latter case we

have peace because of lack of activity; in the former, that peace which comes only because the task is finished well, God's will has been done, the doer entitled to his rest.

*The place of human need.* One needs to ask regarding the values the god-concept and other men-created bodies of knowledge have in aiding the organism. In general, all religion, art, morality have arisen on account of the human need in the preservative struggle. But they satisfy different aspects of the human need, and so function differently to aid the deficient energy of man to become equal to or greater than the opposing stimulus.

*Religion*, as above analyzed, comes to aid in meeting the problems due to man's ignorance and weakness. Ignorance of how to cope with the forces of nature, to stay the finger of disease, to gain succor in time of famine, to win the fight and scalp the enemy, to furnish a guide for the dissection journey — such are the problems growing out of man's weakness and ignorance. These cause religion to take her stand upon the side of an insufficient native power.

*Art* also arises to meet a need due to the preservation struggle, but this need is not that due to ignorance and helplessness. These called religion to the succor of energy, so that the organism might have courage to strive until knowledge can be increased and helplessness made less apparent. The very evil with which art has to do is the evil inherent in the bare necessary struggle for existence itself. The struggle which meets the case by having knowledge and help is itself the source of a new need. This, art arises to meet. This new evil points to the insufficiency that remains to the organism as a whole after full account has been taken of the satisfaction obtained in the mere preservation struggle — that necessary satisfaction the struggle which gives food and which is involved in reproduction naturally produces. This is not sufficient. The creation of the beautiful has for its function to make good this insufficiency in question and to satisfy the need which grows out of knowledge and assistance. But as art grows and adds to native power so as to make this equal to or greater than the organic demands (with the modification of dissatisfaction and unrest), the task of religion becomes lighter and the struggles of the ignorant and helpless seem easier to face.

*Morality* satisfies a life need. In the evolutionary struggle, the strong have emerged. Oppression has become the watchword of

the ruler, hatred of the weakling. This breach has been natural, and master, because of his fitness, has been set over against servant, the rich against the poor. Historically, this has proved in part unfortunate, since this condition lowers the life within the paired group and exposes the divided group to the power of a weaker alien force. Morality has arisen for the purpose of creating harmony, to bring equilibrium between master and servant. This involves not only equality as viewed objectively (from a legal basis), but subjectively (as in accordance with the general principles of brotherhood). Through following its principles social equilibrium is obtained.

*The human-need basis.* We see, therefore, that the functions of religion, art, and morality are different, both etiologically and teleologically. This difference is due to the fact that they satisfy different human needs. It is not that they satisfy the same need, but rather the different modifications of a single unitary need. Religion will be satisfied by dogma, creed, cult, institution; art by music, drama, painting, sculpture; morality by law, family, vocation, the state. To repeat, this does not mean that the one general need is the same, and that religion, art, and morality are merely three ways of satisfying it. Rather, they are different panaceæ for different needs that arise in the action system of the organism as it carries out its evolutionary tasks. As long as one struggles, religion, art, and morality must be his companions. If the task is hard enough, man needs religion. With the solution of each new problem a newer and greater one arises. Man's prayer that he keep his religion should be that he be provided with tasks that overtax his strength. Then he will rely upon that power that is a little stronger than himself, and then will he have the strength to meet and overcome the evil in his way.

### QUESTIONS AND PROBLEMS

1. Judge Ben B. Lindsay is quoted as stating that, if environment were corrected *in toto*, ninety-six per cent of the delinquents would be saved. Discuss and evaluate.
2. Which factor is more important for moral development — what nature does for one, what society does, or what he does for himself? Illustrate.
3. Is it wise to excite the state of doubt in early adolescence? In senior high school?

4. How may a youth be taught the facts of biological evolution in general science without becoming shipwrecked in his religious faith?
5. Attempt to cite instances of adolescents feeling the three stimulus-response formulæ stated as typical of mysticism, redemptive religion, and morality respectively.
6. Should direct moral training be given? How can it?

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## SECTION II

### PSYCHOLOGY OF THE JUNIOR HIGH SCHOOL PUPIL (APPLIED)



## INTRODUCTION TO SECTION II

THE junior high school is more than an administrative convenience designed to relieve congestion by a redistribution of upper-grade pupils; it is the natural outcome of the effort of education to keep pace with the developing needs of an increasingly complex society. With social and civic progress, the educational consciousness of the community is aroused to demand more education for all its members and diversified training in the interest of wise vocational adjustment. The junior high school has evolved in response to this demand. Through its agency the level of popular education is gradually being raised to include a ninth year for all children, and varied lines of educational advance are being marked out in accordance with individual differences and community needs.

### *Underlying principles*

The underlying principles of the junior high school may be summed up in the following terms: (a) coördination; (b) differentiation; (c) exploration; (d) participation; (e) integration. A brief consideration of each of these follows.

**Coördination.** The junior high school must be the coördinating unit in the entire public school system. One defect of the former 8-4 type of organization was the completeness of the break in content of studies, method, and daily program between the grammar school and the high school. Under the 6-3-3 plan the transition is a gradual one from elemen-

tary school to junior high school, and from junior high school to senior high school. This is accomplished in the following ways:

(1) *Transition in content of studies.* By including in the work of the seventh and eighth grades simple introductory lessons in foreign languages, science, geometry, algebra, drafting, and shop practice, pupils are given a preliminary understanding of the materials, the vocabulary, and the processes of these studies. Such lessons are pre-high school in character; they do not consist of the first lessons of high school subjects thrust down into lower grades, nor do they supersede the necessary continuance of fundamental studies begun in the elementary school.

(2) *Transition in method.* In the elementary school study and recitation are composite activities under teacher guidance. In the junior high school, pupils are made conscious of their study processes and are trained to increasing independence in the supervised study period. This is an intermediary step to the complete independence of home study required in the senior high school.

(3) *Transition in organization.* The departmental program of the junior high school, with its longer period and its emphasis upon the intimacy of relation between home-room teacher and class, is a natural transition from the one-teacher plan of the elementary school, and at the same time a preliminary stage of advance to the more complete subject-specialization of the senior high school. The change is gradual also from the general course of the elementary school to choice of course in the junior high school, and eventually to freer subject election in the senior high school.

**Differentiation.** The junior high school builds its program of differentiated curricula in recognition of the fact that different individuals are attracted by and responsive to different types of training, and also that the vocational life of the community requires diversified educational opportunities. The following program is typical of the extent to which the principle of differentiation may be incorporated in the work of the school:

## FOREIGN LANGUAGE CURRICULUM

English  
Mathematics  
Social Studies  
Science

French or Latin

## TECHNICAL CURRICULUM

English                      Social Studies  
Mathematics              Science  
Drafting  
Elementary Machine Shop  
Cabinet-Making  
Pattern-Making  
Printing

## COMMERCIAL CURRICULUM

English  
Mathematics  
Social Studies  
Science

First Lessons in Business  
Typewriting  
Bookkeeping  
Commercial Geography

## INDUSTRIAL CURRICULUM

*Book Work — Half-Day*

English                      Mathematics                      Social Studies                      Science

*Shop Work — Half-Day*

Boys select one of the following shops:

Cabinet-Making	Electricity	Machine Shop	Print Shop
Drafting	Gas Engine	Pattern-Making	Sheet Metal
Painting and Decorating			

Girls take work in the following home-making courses:

Cooking	Dressmaking	Millinery	Textiles
Design	Household Science	Sewing	

In addition to differentiations in type of training, the junior high school continues and enlarges upon the work of the elementary school in the recognition of mental-ability ranges. Ability-grouping, with acceleration and enrichment for the very bright, and minimum courses and time adjustments for the very slow, are methods of procedure made administratively possible by the junior high school type of organization.

**Exploration.** The development of the child through early adolescence implies a natural broadening of outlook. Dur-

ing this period, try-out experiences of many kinds are desirable in order that the individual may begin to shape his future along lines of proved adaptability and success. This necessitates the interpretation of experience and the exercise of selective judgment. The junior high school parallels its opportunities for experimentation with guidance activities which assist the student to study himself and his environment, and to make choices in an intelligent and discriminating way.

**Participation.** Participation is the keynote of all the socialized activities of the junior high school. Socialized lesson-procedure and pupil-planning of projects for study are methods of utilizing this principle in classroom work. Student participation in school control is a generally accepted theory of good school management which translates itself into student government in the junior high school, and helps to make of the school a training ground for democracy. The participation of every pupil in the extra-curricular activities provided means not only a well-balanced development for the individual, but a shared recreative experience which is a basic element in social solidarity.

**Integration.** The coöperative era is gradually superseding that of competition, and its dawning is marked by the development of the social consciousness. When the individual feels his relation to the group and accepts his responsibility for social service, he attains to a mental point of vantage from which he views life in terms of the larger success. The junior high school aims toward the induction of each of its members into conscious relationship with the school as the largest social group to which the adolescent has as yet at-

tained. By developing among its students a sense of school spirit and of obligation to render willing service for the good of the whole, social attitudes of brotherhood, loyalty, and civic pride are fostered which, carried from the school into the larger community, as the child develops into the man, mean coöperative effort for the betterment of social conditions.

In the succeeding chapters of this book these underlying principles of the junior high school movement receive further discussion and elaboration.

### QUESTIONS AND PROBLEMS

1. What are the advantages of the 6-3-3 type of organization, as compared with the 8-4 type?
2. Discuss the advantages and disadvantages of departmentalization as to: (a) the teacher; and (b) the pupils.
3. By what means may the junior high school secure an intimacy of relationship with the individual pupil comparable to that which exists between teacher and pupil in the elementary school?
4. "The junior high school would prevent abrupt transitions between the elementary school and itself, and between itself and the upper high school." Explain how the junior high school can accomplish this objective.
5. Discuss the possibilities of student participation in: (a) the planning and presentation of lessons; (b) school control; (c) the establishment of school standards.
6. Explain what is meant by the integration of the school. Suggest means of accomplishing school integration.

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PART I  
INSTRUCTION  
CHAPTER XIII  
SUPERVISED STUDY

Study supervision as a junior high school function. Supervised study is an intermediary technic between the directed work of the elementary school and the complete independence of study expected in the senior high school. The junior high school is a transition unit in the educational system. It must, therefore, give increasing emphasis to the development of those powers in the individual which will help him to make adjustment, gradually and naturally, from the régime of teacher-dependence in the mastery of fundamentals to that of self-dependence in home study. It is true that there is no definite period when a child is taught to study. The school situation day by day, from first grade to college, is either establishing habits of logical thought or failing to do so. No teacher can escape responsibility for fostering good study habits through clear, well-articulated lesson procedures; but in the junior high school *how to learn* is as significant as *what to learn*, and the junior high school pupil should be brought, through study supervision, to a conscious realization of the best processes for effecting mastery of content.

**The nature of study.** Study is no longer assumed to be the memorization of textbook material for reproduction dur-

ing a recitation period. It is considered rather as a vital process by which the individual, reacting to the stimulus of an intellectual difficulty or problem, thinks his way through certain contents or experiences until he reaches a solution which satisfies his own mind. The pupil may read an assigned chapter or listen to a lesson presentation, but, unless the chapter or the presentation provides him with the material to answer some question which has challenged his thought, he will derive therefrom only a superficial, unasimilated series of facts that easily fade from memory because unrelated to any idea-system in his mind.

**The factors of study.** The conception of study as purposive thinking has led to the analysis of the study process into the following factors: (a) recognition of the problem; (b) collection of data; (c) organization of ideas; (d) formulation of judgment; (e) application of ideas; (f) memorization; (g) initiative. These have received such thorough and illuminating treatment from McMurry and Earhart that it is unnecessary to discuss them further. The first five are the familiar steps in the reasoning process, and their appearance as the factors of study is evidence of the close identification of study with logical thinking. Memorization and initiative are accompaniments of the entire process, rather than concluding steps. Content that has been assimilated because "food for thought" is necessarily retained in its associational relations, although some overlearning may be desirable to insure rapid recall in response to various cues. Initiative as a factor in study implies the conscious seeking of the whole reacting personality for a satisfactory solution to the problem as the self views it. Study is a subjective

process, implying self activity; consequently, the free play of personal initiative is inherent in its very nature.

The divided-period plan of supervised study. Every analysis of the study process has shown that it is not a single reaction, occurring spontaneously with all children, but a highly complex mental activity necessitating training. For this reason children must be taught how to study. A basic technic must be devised that in its essentials will be applicable to all subject contents. In general, the divided-period plan of procedure has been found more beneficial than the special study hour in a study room, or the individual conference which offers training only to the weaker students.

The first requisite of the divided-period plan is the lengthened or double period. The complete lesson process, from review to summary, must be carried out under the supervision of one teacher. For this purpose the shortest time allotment that is at all practicable is the sixty-minute period. Where the eighty-minute period is administratively possible it is even more desirable.

Under the divided-period plan of supervised study, a complete lesson-unit includes the following phases: (1) review; (2) assignment; (3) silent study; and (4) summary.

1. *The review.* The review is the part of the lesson devoted to recall and reorganization of content previously studied and essential, as an apperceptive group of ideas, to the new step of the lesson. During this phase of the lesson the children are working coöperatively in highly socialized activities and the teacher plays a minor rôle, guiding the discussion when it goes astray and stimulating it when it tends

to flag. Socialized procedure needs intensive planning by the teacher, and its possibilities will be discussed in a succeeding chapter.

2. *The assignment.* The review aspect of the lesson leads directly into the assignment. Here the teacher assumes the leading part. From the mastered material of the review he carries the children on to a recognition of the next problem to be attacked. The skill with which he causes the problem to emerge, so that it flashes clearly across the mind of each individual as a summons to further mental activity, determines to a degree the eagerness with which his pupils approach the work of the silent-study period. The assignment period will necessarily include explanation and enrichments which will help to make the problem possible of solution and attractive in content. It will also involve "how to study" directions concerning the specific materials to be used. Its main function, however, is to secure the clear recognition of the problem as a preliminary to individual effort toward its solution.

3. *The silent-study period.* During the silent-study period which succeeds the assignment, the children work independently. The slower pupils may need further guidance from the teacher, but, for the most part, if the assignment has really accomplished its purpose, the majority of the students will be able to proceed without assistance. Any evidence of general inability to cope with the lesson is an indication to the teacher of some flaw in planning or presentation. During the silent-study period the teacher is free to observe the study habits of individual pupils, as shown by promptness of execution, concentration of effort, and effective use of ma-

terials, and, as a result of such observations, specific training exercises may be devised.

In any group of forty pupils, no matter how homogeneously classified, there will be a few pupils who work faster than the majority of the class. As the complete utilization of study time for study purposes is a desirable habit to inculcate, a special assignment of work related to the main problem should be provided for the more rapid pupils. Reference reading not required of all pupils, graphs, outlines, the preparation of questions for class use, etc., may become the special responsibilities of the very bright, whose powers are thus utilized not only for self development, but for social helpfulness as well. These children may also be allowed to supervise and direct the work of slow children during the study period, if the lesson presents intricacies that cannot be generally anticipated.

4. *The summary.* When the lesson is a complete unit in itself, or when it is the last unit in a series on a given topic, a summary period is desirable. During this time the main facts of the lesson are arranged in brief but orderly sequence, and a few clear-cut ideas are accorded special emphasis. The summary does not take the place of the review, but it serves to call into prominence the vital ideas which answer the class problem of the day.

**Supervised study in relation to the teacher.** Supervised study as a classroom method lays upon the teacher certain definite responsibilities. The lesson procedure outlined in the preceding paragraphs is necessarily a slow process. For this reason a preliminary evaluation of the entire course of study in a given subject is necessary, in order that the

## LESSON PLAN — SOCIAL STUDIES

HISTORY — GEOGRAPHY — CIVICS

Date..... Grade..... Period.....		
PROCEDURE		CONTENT
CURRENT EVENTS		
Time	Review	
Oral Period		
	Assignment	
Time	General Assignment	
Silent Period		
	Extra Assignment	

Remarks

FIGURE 5. ILLUSTRATING A DAY'S LESSON UNDER SUPERVISED STUDY

teacher may determine which topics are of greater and which of less importance, and adjust time allotments accordingly. Through such a survey the course of study is also analyzed with reference to its thought values, its skill values, and its appreciative values, so that the teacher knows in advance where the problem-study method is appropriate, where repetitive drill exercises are necessary, and where the red-letter day offers an enjoyable climax.

Following upon general evaluation and preview comes the organization of lesson units. This implies daily lesson planning. Effective teaching, economy of time, and absence of strain in the classroom are all contingent upon the preparation of the teacher for his day's work. Preparation involves not only a thorough knowledge of content, but a careful adjustment of method to emphasize the specific values of a given unit, and to utilize to the very best advantage all the time available for the lesson. Where a printed plan sheet or a plan book is used, the writing of plans is somewhat simplified. For the most part teachers welcome the plan sheet for their own use, if supervisory stress is not laid upon form and detail in the writing out of lessons. A convenient plan for a day's lesson under the supervised study method is indicated in Figure 5.

**Supervised study in relation to the pupil.** If the supervised study method is successfully applied, it should result in the formation by the pupil of right habits of study, and a consequent increase in power to attack new problems independently. The systematic conduct of each lesson, the clear-cut aim for each day's investigation, and the proportionate relation between the amount of time available and the

amount of work to be done, are all indirect factors in the establishment of good working procedures. In addition to this day-by-day use of right study processes, how to study is made a matter of direct consideration in connection with specific subjects, and the class works out coöperatively its own directions for the silent-study period. In many schools such directions are provided in printed form, and distributed among the pupils at the beginning of the term. It is preferable, however, to let the class evolve, under teacher leadership, its own how-to-study guides, since the logical procedure in studying a lesson is thus brought more forcibly into the foreground of consciousness. The following are typical "how to study" directions, resulting from class discussions.

#### GENERAL HOW-TO-STUDY DIRECTIONS

1. Have your materials ready and in good condition.
2. Understand just what your problem is.
3. Start without delay.
4. Hold your mind to the lesson until the work is finished.

#### HOW TO WORK PROBLEMS IN MATHEMATICS

1. Read the entire problem.
2. Re-read it, listing on paper what is given and what is required.
3. Solve the problem without interrupting yourself at any point.
4. Ask yourself the question, "Is my answer reasonable?"
5. Prove your work if possible.

#### HOW TO STUDY A HISTORY LESSON

1. Be sure that you understand the assignment problem.
2. Read the entire lesson through once.
3. Pick out its important points with reference to the problem.
4. Question yourself about the lesson.
5. Re-read important parts.
6. Read what another history has to say on the subject.
7. Summarize the lesson by telling yourself its main facts.
8. Ask yourself, "Have I reached a conclusion concerning the problem?"

HOW-TO-STUDY DIRECTIONS FOR WRITTEN COMPOSITION<sup>1</sup>

## The "Write" Procedure

- |          |   |                                       |
|----------|---|---------------------------------------|
| Ready!   | { | 1. Collect your material:             |
|          |   | See                                   |
|          |   | Converse                              |
|          |   | Read                                  |
|          |   | Think                                 |
| Get set! | { | 2. Make an outline (pencil).          |
|          |   | 3. Write a first draft (pencil).      |
| Go!      | { | 4. Read and correct your first draft. |
|          |   | 5. Make a finished copy (ink).        |
|          |   | 6. Read your final copy.              |

The true test of any teaching method is the extent to which it makes the individual independent of help and supervision. The supervised study method with its stress upon self activity, its direct and indirect efforts to lead pupils consciously to follow logical thought-processes, and its encouragement of concentrated work through emphasis upon time relations, is a transitional training-process directed toward the development of self-confidence and power in all students.

## QUESTIONS AND PROBLEMS

1. What principles of the supervised study method can be used to advantage when pupils, for administrative reasons, are obliged to prepare their lessons at home?
2. Under the Herbartian lesson plan the teacher stated the aim of the lesson to the class. Criticize the procedure and suggest a better method.
3. Discuss the value of outlining as a study process in connection with content subjects, such as the social studies.
4. Starch suggests three types of studying: (1) the reading type; (2) the laboratory type; (3) the analytical or reasoning type. (*Educational Psychology*, p. 179.) Discuss this analysis of study processes.
5. Discuss the following statement: "The work of the school is properly to supervise and direct the individual while he teaches himself."

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<sup>1</sup> Hatfield, W. W., and McGregor, A. L., *English in Service*, Book I, p. 162. By permission of Doubleday, Page and Company.

## CHAPTER XIV

### SOCIALIZED PROCEDURE IN THE CLASSROOM

**The class as a social group.** Learning for learning's sake is no longer a prime objective of the school. Education, in both its cultural and its utilitarian aspects, aims at the social usefulness of the individual. Until comparatively recent years, however, social values have been considered as necessarily deferred values. Children were to be educated in order that when adulthood was finally reached they might be worthy of the society of which they found themselves a part. The psychological fact was disregarded that, in normal circumstances, modes of conduct and attitudes of mind are evolved from the daily experiences and reactions of the individual, and are not the sudden release into action of forceful impressions passively retained in childish minds for use when manhood arrives.

So long as education was considered a storing-up process, the ideal educative situation was that of the tutor and the single pupil. Class instruction was looked upon as the compromise of democracy with the necessity of uplifting the masses. That the bringing together of many children for instructional purposes created a social situation which might in itself be educative never entered the minds of teachers a few decades ago. Instead, every effort was made to reduce the schoolroom to an individualistic basis. A stern disciplinary régime attempted to impose upon each child the rule of silence and immobility. The teacher prepared and presented certain facts to be learned by the pupils, and the sole

duty of each pupil was to accept without question what was thus brought to his attention and to be ready to reproduce the given information at call. His own success in so doing was his chief concern, and pupils were pitted against one another in competition for high marks. Mutual helpfulness in the accomplishment of common tasks was banned, and anything that verged upon an interchange of ideas was suppressed as a breach of discipline. Since such a system inevitably discouraged initiative, regimentation and standardization resulted rather than individual development.

With the realization that education is behavioristic, that it is essentially experience translating itself into thought and action, the desirability of utilizing social tendencies and letting social values emerge in the classroom environment becomes apparent. Participation and coöperation are fundamental attitudes to be developed through the daily intercourse of children in their work and play. Individual effort and investigation are motivated, not by a desire to surpass all others, but by a willingness to make worthy contribution to the common undertaking of the class. Results attained may eventually be rated by the teacher, but it is of greater importance that the products of study are to be submitted for judgment and comment to the members of a group coöperatively engaged upon a given piece of work. Nor does the action and reaction of one personality upon another produce a disciplinary situation subversive of order and direction. Socialized procedure offers the natural outlet for natural social impulses which, under the repression of a formal régime in the schoolroom, were too often transmuted into undesirable hidden activities.

**Socialization of the content of studies.** The socialized lesson is not a special type of lesson, having a definite series of steps laid out according to precept and rule. It is rather a recognition by both teacher and students of the fact that they are co-workers, striving together for the satisfaction that accompanies intellectual achievement when interest is strongly engaged. The truly socialized lesson centers about a content of recognized social worth. Experience, not mere collection of facts, is the great educative force. Studies are socially valuable because they permit a vicarious reliving of the past, as in history; a rediscovery of unvarying truth, as in mathematics; an understanding of the natural environment, as in science; and an emotionalized and idealized contact with the romance and tragedy of life, as in literature. The social situation heightens the sense of actually passing through new experiences in the classroom. It is humanly desirable to communicate with others concerning our problems, discoveries, and satisfactions, and by such communication individual attitudes are altered and individual experiences enlarged. A subject of vital interest will, almost without direction, project itself into a socialized presentation, so eager are pupils to talk over their ideas and arrive at a common understanding.

**The project as a socialized content.** The attempt to evaluate content in the light of social values generally leads to the use of projects in the classroom. The term "project" in the educative sense was originally used in connection with hand-work enterprises, but it now connotes any undertaking definitely purposed, planned, carried out, and judged as to results by the pupils themselves. An example

of socialized activity in the carrying out of a study project follows.

Out of many topics suggested in the course of study, an eighth-grade class decided to consider the problem: *Why has the United States increased more rapidly in population since 1790 than any other nation in the world?* A period was taken to plan the work to be done, and the following outline resulted from class discussion, a pupil secretary writing it on the blackboard as given:

*General problem:* Why has the United States increased more rapidly in population since 1790 than any other nation in the world?

1. How do we know that this is true?  
(Look up census statistics of our own and other countries.)
2. What are the causes of increase in population?
  - (a) Increase when birth rate exceeds death rate.
  - (b) Conquest of diseases.
  - (c) Improved transportation and communication so that food supply is more constant.
  - (d) Immigration.
3. Is any other cause likely to increase population?  
(a) Movements to decrease warfare.
4. Which of these causes most apply to the increase of population in the United States?

**Study procedure.** Reading references were next collected, all pupils contributing whatever they could find that had a bearing upon the subject. An elected chairman then apportioned the various topics to committees of pupils, and dates were set for committee reports. Preparation periods were allowed in school, but the keen interest aroused carried over into library visits after school hours. On the appointed dates the various committees reported in any manner preferred. In some cases the chairman of a committee pre-

sented a combined report; in others, all members took part. Following each report questions were asked freely by the other pupils, and the work of each committee was finally judged by the class as to accuracy, completeness, and interest.

A keen zest for study and research always accompanies pupil-planned activities, and the social aspect of the entire procedure holds each member of the class up to his highest standard of achievement. The failure of any pupil to do his part halts the progress of the entire group. The situation requires responsibility and group coöperation, and these qualities thus receive the emphasis derived from social sanction.

It is not to be inferred, however, that all socialized lessons are necessarily of the project-problem type. The acquisition of a mechanical skill (legible penmanship, for example, or speed in silent reading) may have real social worth as a necessary means to further experience. The class then socializes the activities of acquisition by devising its own drills and devices for securing improvement. The ingenuity which pupils display in discovering new ways of making practice periods interesting is illuminating to the teacher, and suggestive of untapped sources of originality and initiative.

**Socialization of the lesson form.** With the shift in educational thought from the teacher and what he should do to the pupil and what he does, has come the belief that any monopoly of the teaching situation by the teacher alone is a check to the self-activity of the pupils. The true teacher is not interested in a type of training which produces citizens who are capable only of executing the orders of others. In most of the deliberative situations, whether trivial or significant, in which the individual finds himself, there is no one to give

directions. He must accept that responsibility himself. The wise teacher, therefore, does not assume all leadership in his class nor rest content with mere obedience to command. He seeks to share with the children his directive activities. The carrying-out of the lesson is frequently entrusted to pupil leaders, judges, and chart keepers who become responsible for its ultimate success. The pupil-leadership aspect of the socialized recitation has attracted much attention among teachers, but it is unwise to infer that the mere handing over of the conduct of a lesson to a pupil director insures social activity. The pupil leader may usurp dictatorial powers and reduce the lesson to an entirely formal question-and-answer procedure. Such a leader must be trained to feel that the occasion is an opportunity for him to show, not how much he knows himself, but to what extent he can call out the best efforts of his classmates and at the same time keep the discussion to the point. While leadership tends to become a prerogative of the brighter pupils in the class, the opportunity to undertake its responsibilities should be frequently shifted because of the training-values which it affords.

Socialization of the form of the lesson usually means increased interest in its content, even though this has lost the freshness of new material. For this reason it offers an excellent device for review purposes. Sometimes parliamentary procedure is desirable and sometimes it proves a hampering form, but courteous discussion and questioning from the floor are always to be encouraged. There is danger in the use of the socialized lesson form that the brighter group of pupils will monopolize the discussion and that the slower pupils will be entirely submerged. There may also develop a tendency toward quibbling and over-questioning. In

either case the teacher actively assumes guidance and points out to the class exactly where the difficulty lies.

**The advantages of socialized procedure.** Socialized procedure means day-by-day training in the underlying principles of helpful community living. This fact alone gives it social and civic value as an educative process. It has certain pedagogical values as well. It permits of interesting variations in classroom activity; it lessens the disciplinary strain of the school situation by utilizing the play instinct as an adjunct to learning; and it substitutes group planning and direction for teacher-mandate. Essentially it substitutes for competitive and individualistic motives to excel a desire for social approval, and a willingness to serve the group well in order that such approval may be deserved.

### QUESTIONS AND PROBLEMS

1. "The cultivation of a sense of values is absolutely essential in the operation of the socialized method." Discuss this as a guiding principle: (a) for the teacher; (b) for the pupils.
2. "In a certain geography class a teacher, by actual count, put eighteen questions in two minutes, a rate which seemed to be habitual with her." Discuss the effect of such a recitation upon the pupils. Suggest better methods of procedure.
3. Is it possible for pupils to determine projects for class investigation when the course of study is prescribed for each grade? Explain.
4. When a socialized recitation is being conducted entirely by pupils, what should be the teacher's part?
5. What are the dangers in class criticism of individual contributions to the lesson? How would you overcome these difficulties?
6. Discuss the application of the following (from Dewey) to the classroom situation:

"The environment is truly educative in its effect in the degree in which an individual shares or participates in some conjoint activity. By doing his share in the associated activity, the individual appropriates the purpose which actuates it, becomes familiar with its methods and subject matter, acquires needed skill, and is saturated with its emotional spirit."

## CHAPTER XV

### INSTRUCTIONAL DIFFERENCES CORRESPONDING TO ABILITY GROUPING

**Ability grouping.** The development of the measurement movement in education coincident with the spread of the 6-3-3 type of school organization has been peculiarly advantageous to the administration of the junior high school. With the centralization of many students in seventh, eighth, and ninth grades, some method of securing beneficial grouping becomes imperative. Since classroom procedure must be largely a matter of mass instruction, the desirability of classifying students with regard to homogeneous ability is generally conceded. Grouping by ability may be secured: (1) through teachers' ratings; (2) through the use of group intelligence tests; and (3) through achievement tests.

*Teachers' ratings as a grouping basis.* While it is true that an experienced teacher, after a few weeks of intimate, daily contact with his class, can rate his pupils with a fair degree of accuracy relative to their actual accomplishment, it is nevertheless true that the standards of various teachers differ, so that the junior high school, taking children as it does from several contributing schools, must discount the value of scholastic ratings, coming from various sources, as a basis of group arrangement. The teacher in school B may have generally lower standards than the teacher in school A. It would be unwise, therefore, to consider that pupils from school B having a higher rating than those from school A

naturally belong in a more rapidly moving group when they enter the junior high school.

*Intelligence tests as a grouping basis.* The use of intelligence tests to determine class grouping is doubtless more scientific than the use of teachers' ratings. Through such tests the mental abilities of all children about to enter the junior high school are measured by an objective and standardized process. The intelligence tests fail to reveal, however, those general habits of industry, willing coöperation, nervous stability, etc., which are undoubted factors in school success. Used without other check, classification by test scores may result in a distribution of children into groups of similar mentality, but decided inequality with regard to school progress.

*Achievement tests as a grouping basis.* The method of grouping by achievement tests has as its objective the classification of students with reference to specific abilities. Rigidly followed, this method may place a pupil in one group in English, in a different group in history, and in still another group in mathematics. While this would, perhaps, prove a more accurate classification with reference to school achievement, it presents serious administrative difficulties which tend to nullify the advantages now apparent in the class unit plan.

*Combined test score and teacher rating as a grouping basis.* That procedure in grouping seems generally most acceptable where a combination of the intelligence score and the teacher's estimate can be secured. The following method has proved satisfactory.

In the upper sixth grade, just preceding entrance to junior high school, all pupils of all contributing schools are given

a group intelligence test. The tests are administered and scored by trained workers, other than the teachers of the classes. Without a knowledge of the test scores, each teacher is then asked to rank his pupils on a five-point basis, rating as *one* those whom he considers excellent and as *five* those whom he considers very poor. The teacher's estimate is then made a comparable number <sup>1</sup> with the intelligence score, the two are added together, and the resulting combination score is used as a basis for grouping. These final scores are arranged in order from highest to lowest and counted off into classes of approximately forty pupils. In counting off pupils, chronological age is taken into account to secure a young-bright group, a young-slow group, and an old-slow group, etc. This procedure has the merit of recognizing through the teacher's estimate those character factors which make for success, as well as the type of ability measured by the intelligence test. In general, the teacher's estimate and the intelligence score show a high degree of correlation. Cases of marked discrepancy are subject to further investigation and close observation. For concrete illustrations of class groupings resulting from the procedure here described, see Tables X, XI, XII, given on the pages which follow.<sup>2</sup> (Owing to school congestion these classes entered

<sup>1</sup> The equivalent value of the teacher's estimate is obtained by determining the entire number of children marked *one*, counting off this number of scores on the intelligence rankings when arranged from highest to lowest, and finding the average of scores thus counted off. This average then becomes the equivalent of the teacher's rating *one*. Equivalents for *two*, *three*, *four*, and *five* are found in the same way.

<sup>2</sup> Used by permission of Miss Leila Martin, Director of the Department of Child Study, Rochester, New York, under whose direction this work is carried out for the junior high schools of Rochester.

TABLE X. TEACHERS' ESTIMATES AND INTELLIGENCE SCORES —  
GROUP I (HIGH GROUP — YOUNG)

NAME	SCHOOL	CHRONOLOGICAL AGE	N.I.T. SCORE	TEACHER'S ESTIMATE	COMBINED SCORE
Lillian S.....	22	12-5	163	1	324
Olga P.....	22	11-11	157	1	318
Norman S.....	22	12-2	152	1	313
John R.....	36	12-5	164	2	311
John B.....	22	12-1	160	2	307
Elmer K.....	22	12-5	144	1	305
Sophie C.....	22	12-4	143	1	304
Morris M.....	18	11-11	156	2	303
Stanley S.....	26	12-0	154	2	301
Edward K.....	26	12-6	139	1	300
Sadie K.....	26	12-2	150	2	297
Victor E.....	22	12-3	135	1	296
Robert H.....	36	12-8	149	2	296
Joseph V.....	27	12-1	149	2	296
Josephine C.....	36	12-6	147	2	294
Isadore L.....	26	12-5	144	2	291
Dorris R.....	36	12-1	161	3	291
Sarah P.....	20	12-0	143	2	290
Katherine K.....	23	12-0	142	2	289
Jeannette C.....	20	12-3	141	2	288
Salvatore A.....	27	11-11	175	4	286
Louis S.....	27	12-1	139	2	286
Ruth K.....	22	12-2	138	2	285
Leon D.....	20	11-11	138	2	285
Ruth B.....	22	11-11	154	3	284
Ruth L.....	22	12-1	137	2	284
Tony V.....	18	11-8	136	2	283
William R.....	26	11-8	136	2	283
Lillian K.....	26	12-2	152	3	282
Paul L.....	36	12-5	151	3	281
Robert S.....	20	12-4	150	3	280
Louis A.....	18	11-8	150	3	280
Chester R.....	36	12-1	150	3	280
Mary B.....	22	12-0	132	2	279
Tillie M.....	20	12-2	132	2	279
Gertrude F.....	18	11-9	132	2	279
Mildred S.....	26	12-4	149	3	279
Albert S.....	20	12-2	149	3	279
Pauline H.....	20	12-0	149	3	279
Anthony P.....	26	12-6	131	2	278

Total number of children examined, June, 1923..... 419

Group test used — National Intelligence Test, Scale A, Median test score.. 120.3

Teacher's estimate in terms equivalent to N.I.T. scores:

1 .....	161
2 .....	147
3 .....	130
4 .....	111
5 .....	87

TABLE XI. TEACHERS' ESTIMATES AND INTELLIGENCE SCORES —  
GROUP VI (AVERAGE GROUP)

NAME	SCHOOL	CHRONOLOGICAL AGE	N.I.T. SCORE	TEACHER'S ESTIMATE	COMBINED SCORE
Ruth W.....	36	12-9	108	3	238
Bernadine R.....	36	13-3	126	4	237
Edith S.....	36	12-6	126	4	237
Aaron T.....	9	13-5	125	4	236
Howard B.....	36	12-11	105	3	235
Florrie C.....	36	13-4	125	4	235
Rose J.....	20	13-6	105	3	235
Morris L.....	20	13-2	105	3	235
Carl T.....	22	12-11	124	4	235
Lawrence R.....	27	12-6	124	4	235
Anna S.....	18	12-9	124	4	235
Charles B.....	18	13-0	124	4	235
Michael W.....	18	13-3	147	5	234
Katie F.....	9	12-8	123	4	234
Charles V.....	18	13-10	123	4	234
Bessie R.....	9	13-3	123	4	234
Dorothy C.....	22	12-8	123	4	234
Frances C.....	18	13-2	123	4	234
Bennie R.....	18	12-8	103	3	233
Hilda B.....	18	13-0	122	4	233
Dominack H.....	36	13-10	122	4	233
Zella C.....	9	12-7	122	4	233
Joe R.....	18	13-0	102	3	232
Harold J.....	26	12-5	121	4	232
Orville W.....	20	12-5	121	4	232
Catherine J.....	36	12-11	121	4	232
Ruth O.....	22	12-11	121	4	232
Harold R.....	22	12-9	121	4	232
Frank K.....	18	12-5	120	4	231
Ruth S.....	36	12-8	101	3	231
Bessie W.....	26	12-8	100	3	230
Sarah P.....	9	12-11	109	4	230
Sarah N.....	27	13-4	119	4	230
Stanislaus W.....	22	13-5	119	4	230
Walter Z.....	36	12-5	99	3	229

Total number of children examined, June, 1923. .... 419

Group test used — National Intelligence Test, Scale A, Median test score.. 120.3

Teacher's estimate in terms equivalent to N.I.T. scores:

1 .....	161
2 .....	147
3 .....	130
4 .....	111
5 .....	87

TABLE XII. TEACHERS' ESTIMATES AND INTELLIGENCE SCORES —  
GROUP X (LOW GROUP — OLD)

NAME	SCHOOL	CHRONOLOGICAL AGE	N.I.T. SCORE	TEACHER'S ESTIMATE	COMBINED SCORE
Alfred L.....	26	14-2	99	5	186
Josephine D.....	27	13-10	98	5	185
Sylvia S.....	26	13-8	98	5	185
Michael P.....	9	14-7	74	4	185
Santina L.....	27	13-7	96	5	183
Sebastian I.....	36	14-0	96	5	183
Mary B.....	18	14-6	96	5	183
John A.....	27	14-4	96	5	183
Eriberto S.....	20	15-11	70	4	181
Lena C.....	9	13-6	94	5	181
Sarah C.....	27	14-1	94	5	181
Josephine G.....	27	14-2	93	5	180
Joseph F.....	9	14-9	93	5	180
Edward B.....	22	13-7	93	5	180
Sophia R.....	26	14-4	93	5	180
Rachel K.....	9	15-11	69	4	180
Mollie G.....	26	14-9	68	4	179
Yetta F.....	9	15-11	92	5	179
Lawrence T.....	27	15-0	67	4	178
Leah A.....	18	14-5	89	5	176
Yetta V.....	9	13-7	64	4	175
Hector M.....	9	14-9	87	5	174
Louise C.....	9	14-1	86	5	173
Emil H.....	18	14-9	86	5	173
Philip O.....	27	14-8	85	5	172
Helen Z.....	20	14-8	85	5	172
Howard R.....	36	14-1	85	5	172
Rose O.....	18	14-5	83	5	170
Joseph A.....	27	14-8	83	5	170
Mary S.....	20	13-7	81	5	168
Corine C.....	20	14-5	78	5	165
Mary K.....	9	14-2	77	5	164
Sarah Y.....	9	15-0	70	5	157
Anna S.....	9	15-2	63	5	150

Total number of children examined, June, 1923. .... 419

Group test used — National Intelligence Test, Scale A, Median test score.. 120.3

Teacher's estimate in terms equivalent to N.I.T. scores:

1 .....	161
2 .....	147
3 .....	130
4 .....	111
5 .....	87

junior high school in the upper term of the seventh grade rather than in the lower term.)

**Instructional differences corresponding to ability groups.** Grouping by ability, however perfected in technic and administration, will prove a useless expenditure of time and money if the classes thus arranged are one and all expected to cover exactly the same courses of study in exactly the same amount of time. The next problem that emerges in this connection is the problem of corresponding instructional difference. In the case of three hundred children grouped into eight classes, one class will be very bright and one above average; one class will be very dull and one slow; and the remaining classes will be of average ability with reference to a given course of study. By what procedures shall the school take advantage of the roughly homogeneous groupings resulting from classification methods to capitalize the superior intelligence of Groups I and II, and to encourage and develop as far as possible the inferior abilities of Groups VII and VIII? The proper solution of this problem can only be a matter of long experimentation, but several possible adaptations are already in practical application.

**Adaptations for low-mentality groups.** The usual method of dealing with the low-mentality pupil in the non-homogeneous group has been that of retardation by failure, with all its attendant evils — discouragement, over-age adjustment, and early elimination. Needless to say, such a course with entire groups of thirty or forty pupils would be not only reprehensible but well-nigh impossible. On the other hand, time is doubtless a factor in the eventual success of the slow pupil.

*One method* of answering the question, "What shall we do with low-range classes?" lies, therefore, in the organization of the special class which deliberately plans, not the failure of the class at the end of the term and the consequent repetition of an entire unit of work, but rather the slower development of the unit of work over a longer period of time. Such classes usually plan to take three terms for the accomplishment of a year's work. This procedure, while comparatively simple of application, presupposes that, given a sufficient amount of time, every pupil will be able to cover in satisfactory fashion an identical course of study — a position not entirely tenable.

*A second method* of meeting the slow-group problem lies in the application of the stripped program. Where this plan is followed, only the basic promotional subjects are included in the daily schedule of the low-mentality classes, and the work of the afternoon practically duplicates that of the morning. This procedure in effect doubles the time available for the fundamental subjects without lengthening the total time spent in the junior high school. It is open, however, to the objection cited with reference to the preceding plan, and is further undesirable in that it deprives the slow pupils of those very hand-work experiences in which their ultimate success in life must be sought, and of those cultural and æsthetic experiences, such as music and art, which should enrich the lives of all. The stripped program plan lays undue stress upon purely scholastic objectives.

*A third method* of dealing with slow classes is based upon the working-out of minimum courses of study to be covered in the usual time. This procedure seems to be the most

logical solution of the problem, since it recognizes limitation of capacity as well as limitation of rate of learning. Its practical difficulties lie in the determination of basic minimum essentials. It would seem not an impossible task, however, for expert teachers, in the light of past experience, to devise by consensus of opinion minimum courses which would contain the necessary and accepted fundamentals of given studies, and yet be possible of successful accomplishment by the mentally inferior.

It should be said, furthermore, that the utmost care must be exercised in the guidance and placement, both educationally and vocationally, of the slow-mentality pupils. Those of high or average mentality, as a general thing, possess by virtue of intelligence itself a greater power of adaptability or adjustment with reference to their environment. The misplaced low-mentality child, on the other hand, fails to initiate necessary changes in his course or in his job because he fails to analyze his situation and make the necessary effort to remedy his own maladjustment. Some one must help him. Herein lies an important responsibility for the school counselor.

**Adaptations for high-mentality groups.** Two methods for dealing with classes above average in mentality are of general interest to educators, namely, acceleration and enrichment.

*Acceleration.* It is fair to concede that the older bright group in a mentality series of eight classes may safely be accelerated, at least to the extent of completing the work of the junior high school in two and one half instead of in three years. Plans for acceleration differ, but in general

it has been found advisable to secure the advance prior to the eighth grade, where choice of course is usually made. In the Washington Junior High School at Rochester, New York, the forty children of this group complete their seventh year in one term, or in one term with an added six weeks of summer school. These children then choose their differentiated courses. Careful observation of their progress shows that they maintain their high ratings and give no evidence of over-strain or poorer quality of accomplishment. The objection to acceleration has usually been made from the viewpoint of the social situation resulting. An over-bright child, rapidly accelerated, finds himself in a group with which, by age, interests, and maturity of judgment, he is quite out of touch. This may be true of the occasional case of acceleration, but when acceleration is accomplished by groups rather than by individuals, as may easily be brought about in a junior high school because of the large numbers of children in any one grade, the social objection has little validity.

*Enrichment.* The possibility of enrichment as a solution of the problem of the very bright meets with no opposition. Enrichment may lie within a given course of study by the addition of extra topics for development and discussion; or it may be secured within the program of studies by lessening the number of hours per week allotted to some of the subjects in a curriculum in order to obtain time for other types of training. A high-mentality class, for example, may have its work in English enriched by prescribed extra readings, or it may recite only three times a week in English (as compared with the normal five periods per week) and thus save two periods to be devoted to shop, typewriting, or another

language. The first procedure necessitates preliminary discussion and agreement among all the members of a department as to the additional topics to be used. This means, in effect, the making of maximum courses of study representing a consensus of opinion, rather than the ingenuity of an individual teacher. The second type of procedure involves administrative preparation in the schedule for the additional training to be elected by the members of the bright group.

**Classroom adaptations with regard to ability grouping.** It is quite true that not only must units of subject-matter be determined with reference to the position of a class in the mentality scale, but also that the methods of instruction must show appropriate variation. Every teacher is cognizant of the fact that the bright class and the dull class cannot be handled in the same way, even though the same topic is being taught to both. Analysis and resulting judgments are the chief elements of the problem for the high-mentality group; mere acquisition is a difficulty for a low-mentality group. The very bright will receive better training through the attack upon a broad problem; the slow must have their problems for study reduced to the simplest and most pointed terms.

This is not to say that mere association without analysis is all that shall be expected of the dull. It implies, rather, that while the bright group, brought face to face with a new problem, will be able with a little guidance to untangle its intricacies for themselves, and reduce the whole to simpler parts to be attacked one by one in logical order, the slow pupils will, on the other hand, have to deal with each part as

a major problem, finally synthesizing the whole, with the teacher's aid, into a comparatively simple and limited group of associated ideas.

The following lesson summaries will illustrate, to some extent, variation in the treatment of a given topic to correspond with the mental ability of the group concerned with its mastery.

#### SUMMARY OF A LESSON IN HISTORY WITH A HIGH-MENTALITY GROUP

*Review:* Governor Dale's division of land in Virginia and its results.

The topic was reviewed in a socialized discussion conducted by a pupil chairman.

*Assignment:* From a discussion of successful and unsuccessful crops in the new colony the children were led to state the following problem for study:

*New Problem:* How did tobacco culture affect the early history of Virginia?

Coöperative analysis by the class reduced the main problem to the following subordinate problems, which were written on the blackboard under the original problem:

What created the sudden demand for tobacco?

What is the nature of the plant?

What were the results of its cultivation upon:

(1) Population?

(2) Commerce?

(3) Labor?

(4) Social Life?

(5) Government?

*Silent Study:* The pupils consulted two histories and a students' reference book. More rapid readers used, in addition to their texts, Fiske's *Old Virginia and Her Neighbours*, Cooke's *Stories of the Old Dominion*, and Coffin's *Old Times in the Colonies*, copies of which were available in the room.

### SUMMARY OF A LESSON IN HISTORY WITH A LOW-MENTALITY GROUP

*Review:* Governor Dale's division of land in Virginia and its results.

Questions written by the pupils the previous day (under the teacher's supervision) were used to guide the discussion.

*Assignment:* The teacher described a large farm, and showed the children pictures of far-stretching fields. Life on a farm was discussed. The term plantation was then introduced. The teacher showed the pupils a statement in their text which said: "Another result of tobacco culture was the development of large plantations." The children suggested the following problems for study:

Why did Virginia have plantations?

How was the work done on the plantations?

How did the people live on the plantation?

*Silent Study:* Half of the class used one history text, while the other half studied from a second text. Children who finished before the end of the silent-study period were allowed to group themselves in pairs, each child showing the other what he had found of interest, with reference to the problem, in the history which he was using.

**Instruction in non-homogeneous groups.** There remains for consideration the matter of classroom procedure in the non-homogeneous group. In junior high schools where choice is made among differentiated courses at the beginning of the eighth year, it frequently happens that all the children choosing a given course must be placed in the same class, regardless of mentality rating, because not enough pupils have elected a given course to warrant the formation of more than one class.

Teachers of such a group are face to face with a complex

problem. They must utilize to the fullest extent the initiative and mental power of the very bright, and stimulate and develop the more limited abilities of the slow. Topical enrichment through the use of differentiated minimum and maximum assignments affords the best compromise with this situation. Occasionally the teacher will have to resort to the special teaching of small groups within the class. Even though classification cannot always follow upon mentality determination, the teacher who knows the relative mental rankings of his pupils is in a position to administer more intelligently the various methods and procedures of instruction. For this reason it is desirable to secure the ability-ratings of all the pupils in a given group, even though some other factor must receive first consideration in the assignment of pupils to a particular class.

### QUESTIONS AND PROBLEMS

1. Secure a copy of a local course of study in arithmetic for the eighth grade. Show how you would amplify it for a bright group and simplify it for a slow group. Do the same with a course in geography for the seventh grade.
2. What procedure would you suggest in the case of Salvatore A. (see Table X, page 187) whose intelligence rating is high, but whose teacher estimate is low?
3. What arguments would you use with a parent who objected to the classification of his child in a low group?
4. Should the teachers of a school be made aware of the rankings of their respective grades in the mentality series? Give reasons for your answer.
5. Should teachers be made aware of the intelligence test scores of individual pupils in their classes? Give reasons for your answer.
6. Prepare a lesson on any topic for a group that is not homogeneously classified as to intelligence. Indicate the special provisions which you would make to meet the range of individual differences.

## CHAPTER XVI

### FAILURE PREVENTION

**Administrative difficulties resulting from pupil failure.** One of the chief problems confronting teachers and administrators in city school systems is that of failure prevention. If in a given city the average failure increment each term is eleven per cent of the total school population, provision for necessary equipment, space, and teaching force to accommodate retardates must appear as a considerable item of expense. The junior high school principal finds his organization affected in another way by the presence therein of failure pupils. Since subject promotion is an accepted procedure in the junior high school, subject failures must be taken care of through parallel classes in the schedule. A child who is obliged to repeat seventh-grade English, for example, will be one term behind in English throughout his two remaining years in the school, and must be constantly accommodated, therefore, by English classes of lower grade paralleled to the one he should normally attend with his group. With three or four subjects considered as promotion subjects, and the failures in each one demanding consideration, it becomes evident that, unless something is done, the entire schedule of classes will presently be dictated by the needs of the failure pupils — obviously an undesirable situation.

*Mental and moral effects of failure.* More pressing than the economic and administrative difficulties attendant upon

failure are the mental and moral effects of failure upon the pupils retarded. Failure is depressing, humiliating to the personality. The fear of failure may sometimes act as a spur to increased activity, but failure itself, untouched by inspiration from some other source, has never resulted in later conspicuous achievement. The wise man will analyze his failures to avoid their repetition, but he never thinks of them with any glow of satisfaction. In the learning process, the feeling of successful accomplishment establishes a bond between effort and result. Success is a stimulus to further effort.

It has long been known that failure to make normal progress is one of the chief causes of early school leaving. The pupil who is constantly brought face to face with failure ratings on his report card cannot be blamed for taking himself out of an environment which stamps him perpetually as below par. The school which prides itself upon maintaining a high standard by the establishment of a single, arbitrary promotion level, and by the rigid exclusion from its courses of those who fail to reach that level, has forgotten its mission in a democracy. Children have a right to the encouragement resulting from success, and that school will be doing the most for society which tries, by careful grouping, differentiated work, and intensive study of individual needs, to keep its children in a success atmosphere. The attitude of mind which attacks all problems with a hopeful expectation of satisfactory accomplishment is a valuable asset for any individual. Self-confidence is a prerequisite of self-respect, and self-respect is fundamental to noble citizenship.

The school cannot afford, however, to lower its standards

indefinitely for the sake of raising its promotion record. Sound scholarship must prevail if the school is to keep the respect of the community. How then can non-promotion be prevented? Only after an analysis of the causes of failure can remedial measures be prescribed.

*Relation of ability grouping to failure prevention.* Suitable ability grouping, with corresponding instructional differences, will in itself tend to eliminate failure. The absurd situation which required that every one of the pupils at a given grade-level cover exactly the same course of study in the same length of time, regardless of wide gradations in native ability, was a prolific source of failure and consequent school leaving. With the careful adaptation of courses to correspond with intelligence groupings, failure is no longer the foreordained fate of the mentally slow. Nor does the adaptation of content and method to meet the needs of the child mean the general lowering of school standards. A standard is lowered, for example, if the promotion mark of seventy-five per cent is suddenly reduced to sixty per cent for the same work. In the administration of minimum and maximum courses, the same standard of excellence may be maintained within the materials outlined. Less work or a different kind of work will be required of the dull class, but what is accomplished will be well done.

**Causes of failure.** There are many causes of failure operative in a large school that are in their very nature remediable. It will be well to consider these somewhat in detail.

1. *Absence from school.* Absence must be recognized as a prolific cause of non-promotion. The protracted type of

absence due to personal illness or unusual family difficulty is, on the whole, not so serious an obstacle to school progress as that irregularity of attendance which is a notable problem in large cities, and especially among our foreign populations. The child who misses a complete unit of work knows exactly what he has lost; and with teacher assistance, home study, summer school, or opportunity-class attendance he can usually recover lost ground. The child who is out of school now and again, a half day this week and a whole day the next, never obtains a well-rounded, closely associated, thoroughly articulated body of knowledge. His information is generally vague, his ideas confused, and his mental state one of helpless bewilderment. The advantages otherwise afforded through efficient administration and expert teaching are nullified, with many pupils, by the failure of parents to insure daily attendance on the part of their children.

Active publicity campaigns in the school and in the community, home visits, and pressure for rigid enforcement of the compulsory education laws can alone remedy this evil. In many schools the problem of irregular attendance is a constant source of discouragement and annoyance to the teachers. Those who criticize the product of the American school system little know how much time and effort have to be expended merely to secure the daily presence in school of the very children who are in greatest need of education.

2. *Change of school.* Another cause of failure and retardation lies in frequent change of school. In all large cities a section of the population may be classed as migratory. This group includes not only those who move from town to town in search of work or better living conditions,

but also those who move about within the city, as one circumstance or another renders it necessary for them to rent in another district. The following table will indicate how largely the factor of change of school is present in a typical group of seventh-grade junior high school pupils.

TABLE XIII. ILLUSTRATING FREQUENCY OF CHANGE OF SCHOOL

NUMBER OF SCHOOLS ATTENDED PREVIOUS TO JUNIOR HIGH SCHOOL ENTRANCE	GRADE A	GRADE B	GRADE C	GRADE D	GRADE E	GRADE F
One school.....	12 pupils	12 pupils	16 pupils	6 pupils	18 pupils	14 pupils
Two schools.....	12 "	10 "	8 "	9 "	5 "	9 "
Three schools.....	2 "	9 "	4 "	4 "	3 "	5 "
Four schools.....	6 "	2 }	4 "	3 "	6 "	4 "
Five schools.....		1 "			1 "	
Six schools.....					2 "	

Total number of pupils considered.....	187
Per cent of pupils attending only one school.....	41.7
Per cent of pupils attending more than one school.....	58.2

While the condition during the three years of junior high school attendance would tend to be somewhat more stable than that indicated in Table XIII, the presence of this factor of change must receive serious consideration as one of the possible causes of failure to make normal grade-to-grade progress.

Sometimes change from school to school is made easily and with little disturbance; more frequently maladjustments result. In general, pupils who are threatened with term failure because of transfer between schools need only some individual assistance from a special teacher to start them on the road to success. The background is there, but changes

in method, nomenclature, texts, and even in physical and social surroundings make their path difficult until they are thoroughly at home in their new environment. A few hours in an opportunity class will usually help these children to adjust themselves to their work. Locating the cause of their difficulties is the chief step toward solving their problem.

3. *Wrong attitude.* There remains for consideration the factor of wrong attitude, with its adverse influence upon school success. Wrong attitude may take the form of careless irresponsibility resulting from immaturity, or it may be present as an active, disturbing element, willfully setting itself against necessary regulation. In the first case strong, counteracting incentives are necessary. Lessons must be made intrinsically interesting, school honors must be established, ambition must be aroused. Earnest commendation for good work, and steady insistence upon the re-performance of poor work, will eventually create a standard of mastery that will spur on the lazy and indifferent. The use of standard scales in spelling, penmanship, arithmetic, reading, and composition is strongly recommended as a means of setting up objective goals which in themselves act as incentives. Even the irresponsible pupil responds to the challenge to better his own record.

The type of wrong attitude which is active in its resistance to the school régime is known to all teachers. Almost every class contains one or two disciplinary problems that constantly menace the progress of the whole group. It sometimes happens that the troublesome pupils are among the brighter members of the group, and so are in little danger

themselves of retardation. Here the problem becomes one of management only. When to a disturbing tendency are coupled indifference and mediocre ability, the pupil is a candidate for non-promotion.

Probably non-promotion is the true discipline of consequences. Certainly the interests of a class of forty pupils cannot be jeopardized for one. Exclusion from the group, with a consequent loss of work even to the point of failure, is the legitimate outcome of constant misconduct, and should be so upheld before parents and before the school community at large. This mode of treatment is negative, however, and no method of constructive and remedial value must be left untried. Sometimes change of course is desirable if an absorbing interest results. The active coöperation of the home can frequently be enlisted especially in the face of impending non-promotion. Delegated responsibility may sometimes bring about a change of attitude which will reflect itself in better school work.

The type of pupil here described is always a challenge to a teacher's personality and power. If the teacher succeeds in bringing the pupil to a coöperative state of mind, he may congratulate himself. If all his efforts fail to secure response, on the other hand, he need not be over-conscientious in imputing failure to himself. It would be strange indeed if, in a large school which daily houses a population equivalent to that of a village, every personality that emerged in the school group proved amenable to the school control and discipline. The school well may be proud of its unceasing and untiring efforts to win over the recalcitrant, even though its efforts are not always crowned with success.

**Remedial measures for failure prevention.** In the foregoing discussion of causes of failure, remedial measures have also been indicated, but it is well to take into consideration the special types of procedure which may be undertaken in a junior high school to eliminate failure and consequent retardation.

*1. Study-coach organization.* A study-coach organization is designed to help retarded pupils make up units of work in which they have failed, and to enable them eventually to regain their normal classes. It also offers assistance to pupils who have attained promotion, but who show pronounced failure tendencies during the succeeding term. There should be at least one study-coach teacher for each of the basic promotion subjects of the seventh and eighth grades. Ninth-grade pupils, as a general thing, must depend upon outside tutors, night school, or summer school when they fall behind in their work, because of the intrinsic difficulty of paralleling their many differentiated promotion subjects with a study-coach schedule.

Failure pupils are assigned to a study-coach teacher on an extra time basis. If their normal program calls for five periods of mathematics, for example, in the study-coach department they should be allowed seven or eight periods in order that they may review the work of the preceding term and overtake the class which they wish to reënter. Extra time is obtained by omitting shop, music, and drawing temporarily. The study-coach teacher proceeds on the assumption that, although the children are not utterly ignorant of the work of their failure term, there are certain points of difficulty, "apt-to-fail" points, which must be

re-covered with all failure pupils, and certain individual stumbling-blocks which must be discovered and overcome by close observation of each pupil. As soon as any individual is abreast of his class he is returned to it. This in itself is a strong incentive to put forth the utmost effort.

2. *The unassigned teacher.* In a small junior high school, where the number of failures does not warrant the establishment of a study-coach department, an unassigned teacher may be of great assistance in preventing failure. It is the duty of this teacher to work with individuals or small groups sent to him from the regular classes for special assistance. This work is practically tutoring under school direction. It is a very effective way of providing for the child who has lost a unit of subject-matter because of continued absence, or for the child who needs more individual explanation and supervision in the attack upon a new problem than the teacher of the regular class has time to give. The unassigned teacher must be familiar with the content of all promotion subjects so that he may give any type of assistance required, and he must in addition perfect a technique of leading pupils to help themselves.

*The summer school.* Summer vacation classes for retardates, held during a period of six weeks with half-day sessions, are an effective means of overcoming non-promotion, and are, on the whole, less expensive than general repetition. Only needed classes will be established, and only failure pupils and doubtful promotions urged to attend. Classes are thus kept small and legitimate remedial assistance can be effectively rendered. One teacher may handle several grades of work in the same subject, but, in order that stand-

ards may not differ, it is desirable that summer school teachers be chosen from the regular faculty of the school itself.

### QUESTIONS AND PROBLEMS

1. Examine the following term records and suggest factors which might have been operative to cause the failures indicated:

Rating system: A = excellent; B = above average; C = average;  
D = poor; E = failure

	<i>Pupil M</i>	<i>Pupil P</i>	<i>Pupil X</i>	<i>Pupil Y</i>
English.....	C	B	E	E
History.....	E	B	E	E
Mathematics..	A	E	D	E

2. Suggest as many procedures as possible that will tend to prevent three foreign children of average mentality in a given grade from failing in English.
3. In what ways will the methods of the unassigned teacher differ from those of the classroom teacher?
4. What are the advantages and disadvantages of a summer session of school for all pupils who wish to come?
5. What would you say to a parent whose child was failing for disciplinary reasons, and who objected to his exclusion from the classroom?
6. Outline in detail a publicity campaign for your community to awaken parents to the necessity for regular daily attendance.

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## PART II

### SOCIALIZATION

#### CHAPTER XVII

##### THE ORGANIZATION OF THE SCHOOL COMMUNITY

**The school as life experience.** The school exists in order that the accumulated knowledge, the standards, and the ideals of society may be transmitted to the rising generation to become the basis of departure for new accomplishment, for constructive social change, and for the establishment of finer codes and higher ideals. In thus assuming for society the task of interpreting the past to insure progress in the future, the school faces a serious danger. Life is lived in the present. At any stage in its development it is affecting and affected by its immediate environment. Education which has its eye solely upon the past or solely upon the future is concerning itself largely with the abstract and formal details of knowledge, and thus setting aside, as negligible for its purpose, the daily educative influence of coöperative effort and social contact.

The school cannot prepare children for an imaginary future unrelated to the present and distinct from the period of education. Education is life, not preparation for life. Advance is made only day by day, and the life experiences of the here and now are the most potent agencies for the development of the very traits and attitudes which shape the future. The spirit in which a school organization is set up,

and the purposes which it may be expected to serve in the daily lives of the children are, therefore, of equal educational importance with the various curricula and courses of study.

**The junior high school a transition school.** The junior high school should be for its pupils a transition school. It should conserve as far as possible the more intimate group contacts of the elementary school while leading toward the greater freedom of the senior high school. Departmentalization is the intermediate step between the one-teacher plan and the free elective plan; but in departmentalization care has to be taken not to forfeit for children in early adolescence the values inherent in the relatively small and closely associated group. To this end the junior high school should be organized on the home-room plan.

**The home-room section.** The home-room section is a class of from thirty-five to forty pupils grouped on a basis of intelligence, or choice of course, or both. Once organized, it remains as a unit throughout the day and throughout the term. Each home-room section becomes the special charge of a home-room teacher who is also a subject teacher, but who assumes, in connection with the home-room class, the particular functions of counselor, friend, and final arbiter.

**Duties of the home-room teacher.** In a large school comprising perhaps fifty or sixty home-room sections, most teachers will, of necessity, be obliged to assume home-room duties. The teacher as home-room director will be responsible for record keeping with regard to attendance and punctuality, and for the filling out and keeping up-to-date of the numerous card forms which make the effective running of a school city possible. These clerical details, however, are the

least important aspects of the home-room teacher's work. It is his part as guide and counselor to bring his group into living contact with all the ideals of the school. He must establish the idea of cleanliness so that it functions in the details of clean bodies, clean clothing, and clean desks and surroundings. He must be watchful of the general health and welfare of individuals. He must develop with the children high standards of effort and scholarship, and establish as a conscious group possession worthy ideals of conduct. Under his persuasive leadership, the group spirit itself will emerge as a strong factor for righteousness, so that a recalcitrant individual feels immediately the censure and disapproval of that portion of society with which he is in closest daily contact.

**Time allotments for the home-room teacher.** In order that these ends may be served, the home-room teacher must have time to meet his class in the relation of counselor. It is desirable, for closer acquaintance, that the home-room teacher should also be the subject teacher of his home-room section during one period of the day's program, but it is equally desirable that he have further time allotted him when other objectives than those of subject-matter are to be served. Where an opening ten-minute period can be obtained at the beginning of the day, its use for home-room contact is especially beneficial. Short as such a period is, in the hands of a skillful home-room teacher it will tend to establish the class-unit spirit and a collective right-mindedness that will permeate all the activities of the day.

**The weekly class meeting.** In addition to the daily ten-minute period, a half-hour period once a week should be pro-

vided for class-meeting purposes. At this time the home-room, in charge of its own officers and its teacher-counselor, goes into session for the discussion of school affairs, for active participation in school undertakings, and for the establishment of class morale. The home-room sections thus become the units through which are carried out all the major projects of the school, and around which center all the activities of the student government. (The procedure of the class-meeting in its relation to student government will be discussed in Chapter XVIII.)

**The school community.** Just as every family is a part of a larger group, the community, or as a State is an integral part of the Nation, so the home-room section is one division of the larger social whole, the school community. The school community is primarily the federation of the home-room sections, but in its objects and purposes it is by no means a loosely knit league of classes. An individual is at one time a citizen of his State and of his Nation; in the same way the child in school is at once a member of the small class unit and of the larger school community.

Essentially the school community comprises all those individuals whose lives are bound up with, and who contribute toward the life of the school — students, faculty, and janitorial staff. Just to the extent that these three groups of workers are exerting themselves, unitedly and harmoniously for the good of the whole, does the school community become a forward-moving, progressive body whose members are mutually helpful in their desire to serve the great objectives for which the school stands. The school community is made up of men and women, of boys and girls. It includes

brain-workers and hand-workers, leaders and followers. It is thus an aggregation very similar to the community at large, and containing within itself all the essential elements for training in individual responsibility and group coöperation. If the junior high school conceives of its work in terms of community living, it will find ample opportunity for developing, through actual daily experience in a controlled environment, those habits and attitudes which mean worthy and high-minded citizenship. The home-room unit and the school community integration are the typical organizations through which the socialized activities of the junior high school find outlet and expression in desirable training experiences.

QUESTIONS AND PROBLEMS

- 1. Suggest various ways of establishing strong morale in a home-room class.
- 2. What should be the general qualifications of the home-room teacher?
- 3. Through what procedures may the students of a school be brought to conscious realization of their membership in a school community?
- 4. In what ways does a school janitor serve as a member of the school community?
- 5. How may the learning of history lessons affect school community life?
- 6. A junior high school teacher's weekly program includes the following activities:

(6 periods per day)		
(30 periods per week)		
Lesson periods.....	20	hours
(Eighth-grade mathematics)		
(Ninth-grade mathematics)		
Preparation hours (without class).....	7	"
Home-room meeting.....	$\frac{1}{2}$	"
Faculty meeting (school time).....	$\frac{1}{2}$	"
Attendance at school assembly.....	1	"
Direction of student club.....	1	"

How does this teacher's work at the different periods differ as to: (a) objectives; (b) methods; (c) psychological attitudes?

## CHAPTER XVIII

### CITIZENSHIP TRAINING AND STUDENT GOVERNMENT

**Citizenship training as a school function.** Since the days of Colonel Parker, "Education into Citizenship" has been a favorite motto of the school, and worthy citizenship has been its chief objective. In the minds of too many people, however, citizenship training has either translated itself narrowly into the education of the alien in American manners and customs, or has been understood as an intensive teaching of the constitution to children too young to comprehend the legal stateliness of its phraseology or the nobility of its governmental conceptions. Citizenship thus interpreted has given evidence of a noisy and unmeaning patriotism and a boastfulness that is far from true loyalty. Real citizenship must be more broadly outlined. "A democracy is more than a form of government; it is primarily a mode of associated living, of conjoint, communicated experience." <sup>1</sup>

Citizenship in a democracy implies: (1) service through work and a conscious realization of that service; (2) shared control of governmental functions; (3) group support to great forward movements; and (4) shared recreation. Thus conceived, citizenship is indeed the prime function of the school, and all of the school's activities find their culmination in the development of a worthy citizenry.

<sup>1</sup> Dewey, J., *Democracy and Education*. (The Macmillan Company, 1917.)

Citizenship is not a deferred value. The idea is fallacious that children can be presented with an inert mass of civic information to be held in mind for use ten years hence, when adult responsibilities are undertaken. Citizenship is a matter of attitudes, and attitudes are the mental sets induced by behavior. Since the very conditions of community life are themselves educative, the school, through its controlled environment, has every facility for engendering noble citizenship attitudes if it shapes its organization and directs its procedures toward that end.

**Factors in worthy citizenship.** The school does not propose, even in a theoretical sense, to make itself an exact miniature copy of the adult world. Modern society is too complex, its activities too manifold, and the interactions of its groups too intricate to permit of duplication within school walls, even if such duplication were in the least desirable. The essentials of noble community living are of the spirit, and through them are the outward forms of citizenship constantly transformed and remoulded. Social progress depends upon the development of two correlative factors in civic life: individual responsibility, and group coöperation. Both of these become the conscious accompaniment of daily experiences in a school organized for true citizenship training.

**Citizenship training through the work of the school.** Since citizenship implies shared activity, and individual participation in the work of the larger whole, constant opportunities for the exercise of citizenship qualities are provided through socialized lesson procedures and classroom projects (see Chapter XIV). Whenever children are engaged wholeheartedly in planning a course of procedure with

reference to a study topic, executing the tasks which center around it, and finally judging the results of their coöperative efforts, there are present all the basic elements of any great civic undertaking, and citizenship training of a high order is inherent in the situation.

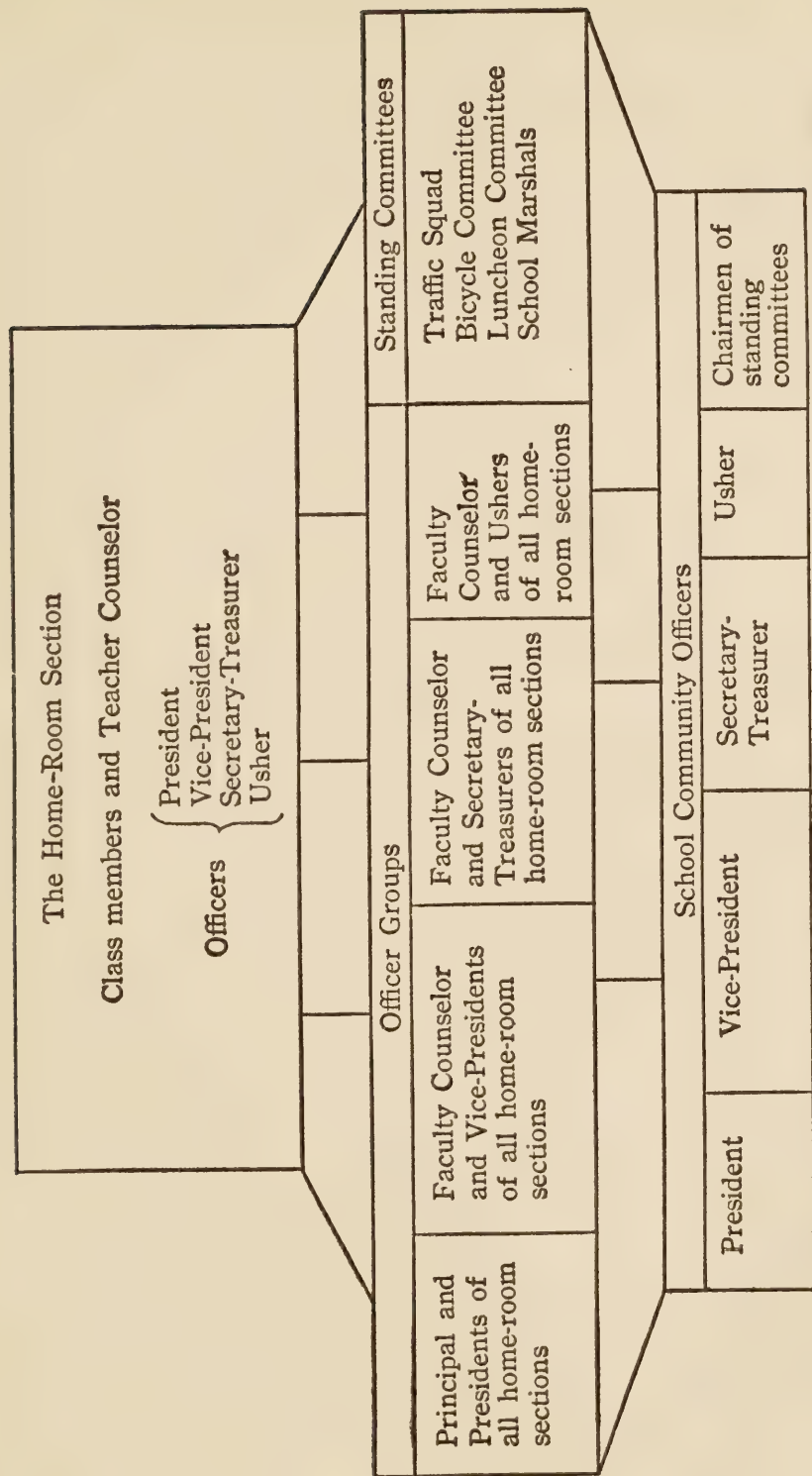
**Citizenship training through play.** It is equally true that shared recreation involves desirable civic reactions. A common background of shared pleasure tends to eliminate class barriers, and personal prejudices give way before good teamwork. School athletics have doubtless contributed much to the establishment of ideas of good comradeship and fair play in American communities. The school club has resolved itself into a group seeking recreation through the pursuit of a common hobby, and has thus helped to set aside racial and caste distinctions within school walls.

**Student government as an organization for citizenship training.** While the entire life of the school is centered around the junior citizenship ideal, it is through the organization of student government that civic responsibilities are most consciously and directly called into play. Since democracy implies participation, student participation in school control must be an accepted educational principle. To the end that such participation may mean active, vital direction of the junior high school community, and not merely the formal acceptance of a theory, a well-organized and effective student government is an essential feature of junior high school life.

**Desirable characteristics of a student government.** In order that the relation of a government to the community governed may be thoroughly understood by the members of the school, and that it may exert a daily influence for good in

the lives of the students, the form of student government adopted must be simple in its organization and direct in its methods of operation. Elaborate copies of adult governments are unsuited to the junior high school age. Nor should the student organization find its chief reason for existence in the necessity for maintaining discipline. It is unfortunately true that the idea of government rarely becomes conscious in the mind of the adult except with regard to its punitive functions. Student government in the school may be one means of training the communities of the future to a different point of view. The school government, planned to facilitate real achievement and progress in school affairs, need have no judicial functions with reference to misdemeanors and no penalty-inflicting powers, and yet may be an active power in securing willing response to thoughtfully accepted regulation.

**A typical student government organization.** A junior high school organized on the home-room basis (see Chapter XVII) will find it advantageous to establish that form of student government which functions directly through the home-room section. The fact that each home-room section maintains itself as a unit during the day, and that it has its own time of meeting for extra-curricular purposes, makes this easily possible. In the student organization illustrated by Figure 6 each home-room section elects its own officers for the term. These officers are then responsible to the home-room for directing its activities with regard to the major projects of the school community, and are responsible to the school community for securing the effective coöperation of their section in school enterprises, in appropriate conduct, and in the establishment of worthy school standards.



**Fig. 6.** STUDENT GOVERNMENT ORGANIZATION, WASHINGTON JUNIOR HIGH SCHOOL, ROCHESTER, NEW YORK

In order that there may be coördinated effort among the home-room sections, officer group meetings are held under the direction and guidance of members of the faculty. All of the class presidents, for example, meet in monthly conference with the principal of the school. From their number is chosen, by vote of the entire school population, a school community president, who thus becomes the chief student officer of the school. All the vice-presidents meet in group conference with a member of the faculty, and from their number is chosen the school community vice-president. In the same way the school community secretary-treasurer and usher are chosen.

**Student government meetings.** If a student government organization is to serve a real purpose, time must be allotted within the school day for its visible and recognized activity. The daily ten-minute period and the weekly half-hour class meeting are essential to successful participation in school affairs. The class meeting should be conducted in parliamentary style, with the class officers in charge and the teacher acting merely as a member of the group. In addition to class business, objectives common to the whole school, such as cleanliness, health, safety, corridor conduct, students' scholarship fund, thrift, service to the city, etc., should be discussed, and resolutions leading to united action put forward. Officers should be called upon frequently for reports of activities in their respective fields, and should be held strictly accountable to their home-room section for the dissemination of information concerning the various projects of the school community.

It is highly desirable that at least once a week the teacher

and his class officers hold conference with regard to the special needs and general policies of their class. Once a month the officer group meetings referred to in a preceding paragraph should be held for the discussion of officer problems, and the clarification of ideas regarding officer duties. Several times during the term the entire school community should meet in convention, in charge of the school community officers, to consider some particular matter of school participation and control, or to launch some large enterprise. Through the class meeting, the officer group meetings, and the school community convention, student government is raised to the level of an active, working, coöperative organization, and the holding of office becomes a real responsibility, not an empty form. Through actual participation in school control and direction, both governed and governors learn vital lessons in democratic citizenship; and individual responsibility and group coöperation become meaningful concepts in the daily life of the students.

### QUESTIONS AND PROBLEMS

1. List what you would consider to be the duties of each home-room officer, indicated in the diagram on page 217.
2. If you were the principal of a junior high school, what steps would you take to initiate a student government?
3. Do you consider it objectionable to invest penalty-giving powers in student boards or councils? Give reasons for your answer.
4. Show in detail how a "Correct Speech Campaign" might be carried out in a junior high school, under the auspices of the student government.
5. If you were the teacher of a seventh grade in which the standards of conduct were not satisfactory, how could you utilize the student government to secure the establishment of higher ideals?
6. Plan a constitution for a student government.

## CHAPTER XIX

### AVOCATIONAL AND SOCIAL ACTIVITIES

**Necessity for training in the worthy use of leisure.** The present tendency in progressive school systems to include within the actual working program of the school wholesome forms of recreation, is indicative of the extent to which education has become synonymous with living. The craving for pleasure is inborn in every individual. Not only is physical renewal effected through pleasurable activity, but the feeling-tone which accompanies such activity blocks aberrant tendencies and brings about a general integration of the personality in complete self-expression. So strong is the pressure for personal enjoyment that, if socially desirable forms of pleasure are not available, lower types will be seized upon to the detriment physically and mentally of individual well-being. The everyday tasks of the majority of the world's workers are becoming increasingly monotonous and deadening. The constant improvement of machinery means less physical activity for man and eventually more hours of leisure. How these leisure hours with their accumulations of unexpended energy shall be occupied is a problem of tremendous social importance, and here, as in the other aspects of life, the school must foresee the need and accept the obligation for training. The worthy use of leisure is, then, one of the cardinal objectives of education.<sup>1</sup>

<sup>1</sup> *Cardinal Principles of Secondary Education*. (United States Bureau of Education, Bulletin 35, 1918.)

Club activities in the junior high school. The junior high school period is particularly a time when, because the individual is seeking wider social contacts, pleasures must be freely offered. Commercialized amusements, good, bad, and indifferent, flaunt themselves in the eyes of youth, and by constant suggestion tend to develop not only habits of foolish expenditure, but insistent cravings for excitement as well. To counteract these tendencies the school must provide pleasurable activities, under circumstances that mean worthy associations and refined surroundings.

It is foreign to the very nature of pleasure to submit to dictation; happiness is truly from within. The school must offer training in the worthy use of leisure, and yet refrain from prescription. This involves the sanction and direction of many types of amusements within the school walls. Athletics have long held a recognized place in student life, but if desirable results in avocational guidance are to be accomplished the range of natural and wholesome amusements presented must be broad enough to attract children of varying tastes and temperaments. For this reason the "hobby hour," or club period, is finding its place in the junior high school. The following list is suggestive of the types of club activity which it is possible to develop:

#### HAND-WORK CLUBS

Aeroplane  
Wireless  
Handicraft  
Santa Claus (toymaking)  
Cartooning  
Illustrating  
Marionette

#### LITERARY CLUBS

Short Story  
Book Lovers  
Dramatic  
Troubadours  
French  
Spanish

HAND-WORK CLUBS (*continued*)

Basketry  
Embroidery  
Knitting  
Laundry  
Millinery  
Crochet

## MUSIC AND ART CLUBS

Glee  
Orchestra  
Art Gallery  
Sketching

## SCIENCE

Bird  
Wildflower  
Chemistry  
Astronomy  
Electricity

## ATHLETICS

Athletic (Boys)  
Athletic (Girls)  
Folk Dancing  
Stunt  
Swimming

## MISCELLANEOUS

Stamp and Coin  
Camera  
Camcraft  
First Aid  
Know Your City  
Travel

## GAME CLUBS

Chess  
Checkers

**The establishment of a club program.** In developing a club program, the first step is to secure a definite time allotment. This means that one period weekly must be set aside for purely avocational purposes. In many localities this period should fall within the hours of the school day, or large numbers of boys and girls who work between four and six o'clock will be deprived of club pleasures. In other districts club activities may be relegated to after-school hours, provided that the willingness and enthusiasm of the teachers are such as to make their services regularly available.

A survey of pupil desires with respect to the types of clubs to be offered should next be made, and, since all stu-

dent clubs must have faculty direction, the faculty must be canvassed to discover club leaders. When the club period is held within the school day, every teacher not excused for special duties is expected to assume the directorship of a club. Experience has shown that in a large school almost every hobby will have some enthusiastic advocate among the teachers, and when the teacher is thus personally interested in the activity of the club which he directs, the best type of leadership and the keenest kind of pupil enjoyment are developed.

After the preliminary survey of possibilities, a list of clubs to be offered is prepared, giving information concerning the specific plans of each club and the expenses and conditions involved in membership. From this list each pupil makes a choice of three club activities which appeal to him, with the assurance that he will be assigned to one of the clubs thus chosen. Assignments are then made by a teacher committee appointed to take charge of all club matters. Before assignments are announced each faculty director is allowed the privilege of accepting or rejecting individuals from the proposed personnel of his club, so that the leader is guaranteed a congenial and harmonious group. After the opening of the club program for the term, changes from club to club are made only with the sanction of the club committee.

**The entering pupil.** As a general procedure, it is desirable to withhold club privileges for one term from the entering pupils of the school. When this is done, the club hour can be utilized with the pupils of the lower seventh grade for instruction in all the special procedures and projects of the school. Pupils may thus be made thoroughly acquainted

with the club idea before they are permitted to join clubs, and the anticipatory state of mind induced leads to enthusiastic entrance upon club activities at a later time. This plan carries the further advantage that, by the withdrawal of this large group of children into an assembly which can be handled by one or two teachers, clubs need not be overcrowded, and in consequence directors may limit their club membership in accordance with the type of activity they mean to pursue.

**Exhibit of work.** Once a year an exhibit of club work should be held. This will stimulate further interest and delight in the club program, and clubs will find ingenious ways of advertising their special activities and exhibiting their products. Such an exhibit usually attracts much attention in the community, and is one means of educating parents to the necessity of providing simple and wholesome amusement for children in the home.

**Training in social courtesy and good manners.** In addition to direct training for the worthy use of leisure, the school can make its usual social activities function in the development of courtesy. Knowledge of a few rules of good form and social etiquette tend to prevent the establishment of those class barriers which represent all that is snobbish, narrow, and provincial in American life. The junior high school, through its organized class and school parties, can set a simple and natural standard of good manners if it considers its social functions in the light of training opportunities, and can thus contribute to a real democracy of enjoyment among its students.

Boys and girls in the last year of junior high school, and

throughout senior high school, are eager for the type of pleasure represented by the evening party, as distinguished from the athletic romp. The self-consciousness, which is a somewhat inevitable accompaniment of these occasions, is allayed rather than accentuated by a little direct preliminary training in the customary usages of good form, in the interchange of courtesies between girls and boys, in proper dancing positions, and in the general tone and level of the party spirit. When girls' and boys' advisers are part of the school staff, this work naturally devolves upon them. Where there are no specialized workers in the social and moral field, the responsibility falls upon the faculty at large. School parties, far from being decried, should be welcomed and encouraged as affording opportunity for a type of training not inherent in other school situations. Supervision of these parties is necessary, but preliminary instruction and guidance are equally desirable.

### QUESTIONS AND PROBLEMS

1. What arguments can you advance for the inclusion of the hobby-hour in the school problem?
2. What arguments can you advance for a weekly time allotment for club purposes during school hours, rather than after school?
3. At the rate of one meeting per week, a club will hold approximately eighteen meetings during a term. Plan a definite program covering a term's activity for any one of the clubs listed on pp. 221-22.
4. Suggest three clubs, not appearing on the list in the text, which you think would prove attractive in local schools. Indicate the type of activity which would be undertaken in the clubs you suggest.
5. List substitutions which may be made in the school for unwholesome leisure activities outside.
6. What general characteristics should be possessed by advisers to junior high school boys and girls?

## CHAPTER XX

### INTEGRATING FORCES IN SCHOOL COMMUNITY LIFE

**Disintegrating tendencies in junior high school organization.** While the value of differentiated curricula as affording exploratory opportunities to junior high school pupils is unquestioned, certain social disadvantages may accompany the classification of children into separate courses unless effort is made deliberately to obviate them. There is abroad in the community a lamentable tendency to contrast disadvantageously manual with mental labor, and to rank an individual in the social scale according to the type of work by means of which he earns his livelihood. The same spirit will manifest itself in a school that maintains academic and trade courses side by side, unless certain shared interests are developed to act as integrating forces in the school community.

In addition to the caste distinctions so easily established among students, and so much to be deplored, departmentalization in teaching threatens the faculty of a school with a kind of disintegration which might be called "compartmentalization." The English teachers, united by their common professional problem, will form one closely knit group, the mathematics teachers another, the social studies teachers a third, etc., and the interests of these small groups will become paramount, in the minds of their members, to the larger interests of the whole school.

Differentiation and departmentalization tend to emphasize individualistic attitudes. True citizenship, on the other hand, demands social outlook and social participation. To establish fine school morale, to develop among students and teachers the attitude of shoulder-to-shoulder comradeship in the attainment of worthy ends, is at once the task of junior high school administration and the test of its success.

**School campaigns as integrating activities.** Whatever the school does as a unit, for the honor of the school itself, will serve as an integrating element. For this reason school campaigns have a decided significance. During the World War the campaign demonstrated its value as a means of centralizing public opinion and evoking united action. The well-planned intensive drive accomplishes the same results within the school community. There is always a tendency to decry school activities which are not centered around the instructional or book-work aspects of school life, but such protest emanates only from members of the community who forget that the school has been obliged inevitably to take over the development of many desirable citizenship qualities which cannot be acquired from books. Health, thrift, safety first, courtesy, service are vital habits which the school is required to inculcate, and yet which are matters of living rather than of learning. These are quite properly objectives for school campaigning.

An entire school can be brought to take a keen interest in cleanliness, for example, through a campaign directed toward that end. Personal cleanliness becomes the subject of class-meeting talks, cleanliness inspection becomes a morning duty in each home-room, how to secure one hundred per

cent cleanliness becomes a problem for officer consideration. School facilities for securing personal cleanliness are provided, slogans are adopted, and assembly exercises, through plays and readings lay stress upon the desirability of cleanliness, until by a kind of cumulative enthusiasm the whole school comes to take conscious pride in the appearance of its own members. Cleanliness of environment is the next step. Desks, rooms, corridors, and grounds undergo a thorough inspection and cleaning. This part of the campaign naturally connects itself with "Clean-up-Week" in the community, and the school reaches out of its immediate environment to render service to the neighborhood.

It is quite true that when the campaign which has focused school attention for a period of weeks comes to an end, effort will slacken somewhat, but the intensive character of the drive, with the enthusiasm and coöperation which it has generated, provides the impetus which launches the habit strongly, and the glow of success in group achievement places behind it the pressure of social sanction.

Such campaigning throughout a school requires careful and detailed planning. Faculty and students must decide upon methods and procedures, and must actually visualize the results to be striven for. Only through a clear plan of action, formulated as a preliminary to the initiation of the drive, can successful accomplishment be assured. While the success of the drive is the main objective before both teachers and pupils, the unification of the school through common effort and shared gratification is a significant factor in the maintenance of a spirit of democracy among the students at large.

**Faculty meetings.** The weekly faculty meeting should be one of the strongest integrating influences in the life of the school. It is here that teachers of all departments meet on common ground to discuss problems of general school interest. Matters of school policy are talked over and decided upon; the advisability of certain undertakings is considered and preliminary plans made; and reports are presented by faculty and student committees concerning desired changes and improvements. The success of any project necessitates sympathetic understanding and willing coöperation throughout the entire faculty. One or two teachers opposed or even indifferent can do inestimable damage in the working out of the larger plans of the school. The faculty meeting provides opportunity for spreading general information concerning any piece of work which the school undertakes as a whole, and insures a thorough understanding of the objectives to be served.

Information and understanding are fundamental to the success of any school activity. In addition to matters of routine and to the discussion of specific problems as they arise, it is highly desirable that a school faculty carry on some extended plan of professional investigation. This necessitates the program prepared for the term or the year, with a sufficient number of free dates to permit of faculty attention to specific projects determined by special needs. A faculty meeting program must be interesting in content and recognized as valuable by all teachers, regardless of department. It may include committee reports on readings, presentation of the results of experimentation, contributions from outside educators, and demonstration lessons with

students. Such subjects as vocational guidance, student participation, the use of the problem method in the classroom, are broad enough to permit of investigation from various angles and to offer something of interest to all departments. When the faculty meeting is thus transformed into a series of faculty conferences for the serious study of some important movement in education, a common professional interest is developed which helps to counteract the tendency to group division resulting from departmentalization.

A faculty meeting program, like any other large school endeavor, must be successful if good is to be derived from it. For this reason, once the program is planned, it cannot be laid aside for the discussion of trivial matters of routine, although it must always give place to the consideration of pressing school problems. It is an administrative responsibility, therefore, to devise other means for conducting routine matters of school direction — for example, the mimeographed circular, the bulletin board, the departmental representative — so that the faculty meeting time may be left free for a type of work which means unity of outlook and shared professional advancement.

**The school assembly.** Another integrating force in the school community is the school assembly. It is in assembly that the real school is consciously recognized as an entity by the pupils and teachers who compose it. The assembly draws members of all classes and all departments into a social whole, united for the achievement of dignified and worthy aims. It is not the purpose of the assembly to provide a weekly period of mere entertainment, although a

spirit of pleasure and enjoyment always characterizes the successful program. Information concerning school activities, inspiration for the enthusiastic carrying out of school projects, and shared appreciation of whatever is beautiful and artistic in school life are the essential contributions of the assembly period. Plays, readings, talks, screen pictures, music, and dancing are its media of impression; suggestion rather than mandate is its method of approach. Properly conducted, the assembly is such a potent influence for good in the life of the school that its importance should be recognized by the appointment of a competent director, presumably a teacher of dramatics, to take entire charge of the planning and preparation of its programs.

### QUESTIONS AND PROBLEMS

1. Plan a Courtesy Campaign. Suggest topics for five class meetings, covering such aspects of the subject as courtesy in the home, at school, on the street, and in public places.
2. Arrange an assembly program to emphasize the desirability of courtesy.
3. Work out slogans and devices for making courtesy a popular idea.
4. List books and magazine articles dealing with the subject of courtesy.
5. To what extent is courtesy influenced by nativity; by environment; by training?
6. Plan a series of ten faculty conferences, on any important educational movement that you think would be of general interest to junior high school teachers. Suggest the type of procedure and the specific topic for each meeting.

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## PART III

### GUIDANCE

#### CHAPTER XXI

##### EDUCATIONAL AND VOCATIONAL GUIDANCE

**Necessity for guidance of junior high school pupils.** As soon as a school adopts a program of differentiated courses, it becomes cognizant of pressing guidance problems. Differentiated courses do not differ in fundamentals nor in the common basic elements of culture. Their specializations are vocational in outlook, corresponding in a general way to the technical, industrial, professional, and commercial types of vocation in the community. When a pupil elects to follow a certain course in the junior high school, he thus makes his first, though by no means his final, vocational choice. If pupils are to use the junior high school as an exploratory field to test their powers and aptitudes, preparatory to a later choice of vocation, they must be fully informed concerning the various types of training offered by the school and the significance of each in relation to the occupational life of the community.

**The nature of the guidance problem.** A guidance program involves two kinds of work: (a) counseling, which aims to reach the individual with personal advice and encouragement; (b) class instruction, with reference to educational and vocational opportunities. The former necessitates a sympathetic understanding of the individual; the latter, a thorough knowledge of the vocational world.

**The study of the individual.** The school is constantly confronted with the necessity of finding some compromise between the desirability of individual contacts and the practical necessity of mass instruction. Under a departmentalized plan, a teacher meets about one hundred and sixty children per day. Variations in temperament, health, mental ability, and economic status produce such marked effects upon the learning processes that some type of personnel work with children is an essential accompaniment of departmentalization. When, in addition to securing the greatest possible progress in learning, the junior high school must assume the educational and vocational direction of its pupils, the problem of knowing each individual sufficiently to permit of wise counsel becomes one that taxes all the resources of the entire faculty of the school. Certain methods for securing the necessary information are especially useful.

(a) *The questionnaire method.* The questionnaire offers the simplest method of obtaining information from large numbers of pupils. Through a printed form sent to the home it is possible to discover something of the economic status of the family, the social and recreational life of the child, the educational standards of the parents, and their plans for the child's future. A form filled out by the student himself will reveal some indication of his desires and abilities, and one filled out by the home-room teacher will give the opinion of a trained observer as to the student's traits and characteristics. Such questionnaires should be brief and simple, and should be prepared by the faculty of a given junior high school to meet local conditions. Suggestive forms are illustrated in Figures 7, 8, and 9, given on the pages which follow.

PARENT'S RECORD

To the Parent:

The information on this blank is requested in order that we may help your child choose the course that will bring him the greatest degree of satisfaction and success. Your coöperation will be greatly appreciated.

Pupil's name .....  
Occupation of father.....  
Occupation of mother.....

1. How much longer do you plan to send your child to school?.....  
.....  
2. What are your plans for <sup>him</sup><sub>her</sub> when <sup>he</sup><sub>she</sub> leaves this school?.....  
High School .....Business School.....  
Private School.....Home.....Work.....  
3. For what occupation would you like to have <sup>him</sup><sub>her</sub> prepare?.....  
.....Why?.....  
4. Is <sup>his</sup><sub>her</sub> general health good? .....  
5. What are <sup>his</sup><sub>her</sub> special interests outside of school? .....  
.....  
6. Is <sup>he</sup><sub>she</sub> employed outside of school?.....If so, at what occupation?  
.....  
7. Are there any special conditions which you would like the school to  
take into consideration in recommending a course for your child?.....  
.....  
.....  
.....

Parent's Signature.....

FIG. 7. INDIVIDUAL INFORMATION BLANK No. 1

TEACHER'S RECORD

Student's name.....

Date of birth.....

Nationality.....

---

1. Rating in scholarship: Excellent..... Good.....

Average..... Fair..... Poor.....

2. Rating in handwork: Excellent..... Good.....

Average..... Fair..... Poor.....

3. Special abilities.....

.....

4. Special weaknesses.....

.....

5. Field of special aptitude: Mental..... Manual.....

Artistic..... (Not apparent.....)

6. Physical or mental handicaps.....

.....

7. Rating in the following traits (E-G-A-F-P)

Initiative..... Industry.....

Responsibility..... Self-control.....

Ambition..... Courtesy.....

Coöperation..... Neatness.....

8. Advice as to choice of course?..... Why?.....

.....

Teacher's Signature.....

FIG. 8. INDIVIDUAL INFORMATION BLANK NO. 2

PUPIL'S RECORD

Name.....Date.....

Address.....Grade.....

1. What subject do you like best?.....
  2. What subject is easiest for you?.....
  3. What subject do you like least?.....
  4. What subject is hardest for you?.....
  5. How do you spend your leisure time?.....  
.....
  6. To what club do you belong?.....
  7. Name three of your favorite books.....  
.....
  8. What is your favorite magazine?.....
  9. Do you plan to finish Junior High School?.....
  10. Do you plan to go to Senior High School? .....
  11. After high school what?   College .....Technical School.....  
                                  Business school.....Normal school.....Home.....  
                                  Work.....
  12. Have you ever earned money?.....In what way?.....
  13. Name three occupations in which you are interested?.....  
.....
- Pupil's Signature.....

FIG. 9. INDIVIDUAL INFORMATION BLANK NO. 3

All questionnaire material is subject to misinterpretation, to inaccuracies resulting from suggestion, and occasionally to deliberate falsification. Unsupplemented by other sources of information, the questionnaire is not an entirely reliable basis of educational or vocational counsel, but the knowledge of the individual which it offers is at least a good starting-point for further study.

(b) *Psychological testing.* There persists a popular belief, which the trained psychologist is the first to oppose, that scientific psychology offers an unparalleled method of determining vocational aptitude, and that eventually the psychologist will be able, through a few laboratory manipulations, to give accurate advice to an individual concerning his chief line of success. Such a belief places scientific psychology in the realm of palmistry and phrenology, and should be actively combatted by schools and colleges. The psychologist freely admits that many traits which are factors in vocational success, degree of will to achieve, emotional stability, etc., are not yet measured in terms of his science, and that, should the measurement of such single traits be finally achieved, we shall still be far from that synthesis of characteristics which makes the personality. The so-called vocational counselor who for a fee offers consultation and pretends to give advice, and who, by a patter of scientific terms, deludes the unenlightened, should be exposed as a charlatan and a quack.

On the other hand, degree of intelligence is doubtless a factor in vocational success, and if after patient investigation the psychologist is able to mark out roughly the intelligence planes necessary to achievement in the great types of

vocations, such information will be useful. It has become a general practice in junior high schools to administer group intelligence tests to the student body as a basis for ability classification. Scores are kept on file, and test ratings are thus available to round out the picture of the child when counsel as to choice of course is being offered. While no effort is made to maintain a given level of mentality in the different courses, experience has proved that low-mentality children are seriously handicapped in strictly academic work. Such children are warned of the obstacles which they will encounter, and urged to make other choice.

(c) *Personal conference.* Both the questionnaire and the psychological test offer in the last analysis only paper information. Further contact must be established with that warm, living, changing, human thing — the child himself. Personal conference is the next stage of counsel. While there are frequent conferences between the classroom teacher and the pupil in the normal pursuance of their daily relationship, the presence in the junior high school of a teacher whose sole function is guidance makes possible a more complete discussion of the initial choice with every child. Guidance conferences can never take the place of the active interest of the home-room teacher, but they supplement his work and offer to the pupil another means of information concerning the program of the school, and its varied opportunities. The guidance conference with the individual should precede choice of course, change of course, or withdrawal from school. From the personal interview an alert counselor gains further insight into the child's personality and disposition, and the human element is thus added to the information already contained in record form.

(d) *Home visiting.* The child's attitude toward his school life and toward his future is so profoundly influenced by his home environment that, if the complete knowledge so essential to wise educational and vocational counsel is to be sought in any conscientious spirit, a large amount of home visiting must be done. Administrative provision should be made for such work, preferably by lightening the daily program of two or three teachers who may then act as visiting counselors for the school. Working in coöperation with the guidance director and the home-room teachers, they seek every opportunity for establishing a cordial and friendly relationship with the home, so that the entire work of the school may be freely talked over and thoroughly understood by the parents of the children. Choice of course, change of course, part-time employment, possibility of withdrawal, conditions operating against school success, all of these are matters requiring home conference. Visiting counselors not only keep parents informed, but keep the school awake to the needs of the individual child and sympathetic to the conditions which surround him in his daily life.

**The school and the gifted child.** It should be said in passing, however, that the economic status of the home is not and should not be the basis for recommendation as to choice of course, nor as to choice of vocation. The school must recognize its obligation to the child with special aptitudes and abilities, even though the apparent poverty of the home seems to render lengthened training out of the question. It is the inexcusable fault of our present economic situation that children who have abilities and desires that warrant advanced training are frequently forced, at an early age, to

help bear the economic burdens of the family. The school cannot face this situation with any complacency. It must constantly struggle against such a condition of affairs. For the sake of the State, as well as for the sake of the child, enlightened public opinion must be enlisted to secure, for every prospective worker, training to the limit of his capacity to learn.

At present the scholarship movement is the best tool at hand, pending those progressive economic adjustments which will secure a saving wage for every family. The school must bring to bear upon the money problem for the child all of its knowledge of ways and means, all of its advertising power, all of its authority and prestige. The hearts of people are always warm toward the children of the community. The chief danger in the situation is that the school will take the path of least resistance, accept the appearance of inevitability, and let its gifted children go to work at fourteen or sixteen without the training which would capitalize their exceptional abilities for the good of their generation.

**The dissemination of educational and vocational information.** The school that attempts guidance must not only know its children in an individual way, but it must also be thoroughly conversant with the vocational life of its time and of its community. The average person knows very little about the work of men and women in pursuits differing from his own. When life was simpler and more primitive, the child saw about him in actual operation most of the industries which ministered to the needs of the family. He helped in the tilling of the fields, the care of the stock, and

the building of the house. The shoemaker paid a two weeks' visit to his home, and outfitted the family with shoes for the winter; the carpenter and joiner, the blacksmith, and the weaver were all familiar figures at their daily toil. The minister and the doctor played an intimate part in the affairs of the small community. The sailor came from the sea, and the hunter home from the hill.

The modern child has no such background of observation and participation to help him in his choice of work. Industry has become so complex through specialization that its processes are only dimly understood by those actually engaged in them. Science has opened such endless possibilities that old vocations are constantly changing, and new ones appearing with bewildering frequency. If the child is to have any breadth of outlook, if he is to find in the world of vocation anything but a "big, blooming, buzzing confusion," the school must do what it can to make him acquainted directly through experience, and vicariously through reading, with the varied occupations of mankind. Nor is it entirely necessary to wait for administrative facilities. Geography and history take on a vital quality when occupational study is made a part of them, and the teacher of English composition will find an alluring field of research and accompanying expression open to his pupils in the investigation of vocations.

**The guidance period and the course of study.** The study of occupations is so important, however, that many schools have included in their weekly programs a guidance period which has as its objective the direct dissemination of educational and vocational information. In order that the work

of this hour may be well-balanced, and really enlightening to the pupils in those matters which concern their present and future choices, a course of study must be carefully outlined and a systematic procedure established. The following summary of the work of the guidance period through the junior high school grades indicates the content and materials of such a course. The teaching method is similar to that used in connection with social studies generally.

*In the seventh grade.* The actual courses of the school are studied in detail. Each course is discussed with reference to the subjects included in it, its relation to schools of higher training, and its typical vocational outlets. This work precedes the choice of course by the pupils at the beginning of the eighth grade.

*In the eighth grade.* This is considered the testing or exploratory period for junior high school pupils. Cross-over from course to course is made as easy as possible, and change that is the result of experience and reflection on the part of the child is not frowned upon. In this year occupational studies are not specialized to correspond with courses, but rather an effort is made to broaden the knowledge of all children as to vocational possibilities. Text-books upon occupations are used, as well as magazines and newspaper articles, government surveys, and all available material upon local industries.

In the second half of the eighth year, an effort is made to show pupils the interdependence of all forms of industry upon one another, and the interlocking character of the different planes of vocation. This is done through the study of some great industrial project in the community.

*In the ninth grade.* Pupils are now encouraged to make a more intensive study of some particular occupation to which they feel especially attracted. Much individual library reference work is done, trips are taken, interviews are sought, and valuable material is collected for exhibit.

In addition to strictly occupational studies, the guidance course aims to furnish the child with simple economic information, with a knowledge of the progress of industrial history, and with an under-

standing of labor legislation and the safeguards which it offers both to society and to the worker. Throughout the entire course great stress is laid upon those character and personality traits which are necessary to success in any field of endeavor.

**Placement.** At whatever age a young person completes his school-directed education, there should be some publicly supported agency available to help him in the very serious business of finding a job. The school itself should not undertake this task. Placement, to be efficient, must be centralized in order that proper contacts may be made, both for those who need work and for those who need workers. A central placement bureau connected with the certification office, and under the control of the local educational authorities, is highly desirable, and the closest coöperation should be established between the guidance workers of the school and those engaged in assigning applicants to positions. The employment bureau may then look to the school for helpful information concerning individual children, and will in turn keep the schools informed as to local vocational needs.

### QUESTIONS AND PROBLEMS

1. Vocational guidance is defined as a "continuous process, designed to help the individual to choose, to plan preparation for, to enter upon, and to make progress in an occupation." Explain how the school can help the individual to do these things.
2. List the methods suggested in the text for securing the personal information necessary for sympathetic guidance. What other methods can you suggest?
3. A "Know-Your-School" week for parents is now established in many communities. What advantages are to be derived from this movement?
4. What sources of information concerning vocations are available for a guidance teacher?
5. Outline the kinds of information that should be included in an occupational study.
6. Discuss the guidance responsibilities of the continuation school.

## CHAPTER XXII

### HEALTH GUIDANCE

SOUND health is so essential to the welfare of an individual at every stage of his career that health education is now a recognized part of all school programs. Guidance in the health field involves: (a) health inspection and follow-up; (b) physical training; and (c) instruction and habituation in the principles of right living.

**Health inspection.** The yearly inspection of school children, which is carried on coöperatively under the direction of the health department and the school authorities in many municipalities, is one of the most far-reaching movements of to-day. Not only is the life of the child being rendered happier and more effective through the discovery and correction of physical defects, but the basis is being laid for a stronger generation and a healthier race. Medical inspection is necessarily carried on by experts, so that the work of the school in the matter is first that of pressure and propaganda to secure health inspection, and then hearty coöperation and assistance in the administrative details essential to the program. In general the work is accomplished at the school by a corps of physicians and nurses, who take the height and weight of each pupil, examine eyes, ears, nose, and throat, and test for heart and lung troubles. Cumulative records are kept from year to year. Parents are notified of defects discovered, and clinical appointments are made.

Since inspection loses its value without adequate follow-up,

some provision must be made to assure proper remedial care. In schools having a resident nurse this work becomes part of her regular duties, and cases where medical attention of any kind has been recommended come under the nurse's special observation until remedy is effected. This may mean visiting parents, conducting the child (with parental consent) to necessary clinics, securing the assistance of welfare agencies, giving prescribed treatment in school, and reporting cases for class or program adjustments. Where there is no school nurse in charge, follow-up must devolve upon teachers and advisers. Good health is so fundamental to progress and happiness that every school must deal with the health problem in a conscientious and untiring fashion.

In some cities dental inspection is similarly carried on. A corps of dentists and dental hygienists, with necessary equipment, takes possession of a special room, corridor, or other unused space in the school, and examines the teeth of all children, giving prophylactic service to those who desire it. Where dental inspection is not carried out on a large scale, free dental clinics are usually available and the school must then take the initiative in urging the attendance of all children for dental examination.

**Physical training.** Physical training in the junior high school includes gymnastics, games, rhythm work, and swimming. Time allotments vary in general from one to three hours per week, and the work is in the hands of trained physical instructors, both men and women. The excellence of the physical training equipment in all modern buildings bears testimony to the importance of this phase of education in the eyes of the community. Participation for all, rather than

intensive track and team training for the few, has come to be the accepted rule in school athletics. The chief need at present is more corrective work with small groups to overcome physical defects, particularly curvatures, which yield to properly prescribed systems of remedial exercise.

**Health campaigns.** The appalling percentage of malnourished children in city schools has aroused determined efforts to inculcate good health habits in all grades. The junior high school cannot afford to abandon the health work begun in the elementary schools, nor permit its pupils to become careless in the observance of health regulations. The health campaign following upon the week of medical inspection is an excellent means not only of keeping children and, incidentally, parents informed concerning the rules of right living, but of awakening real enthusiasm for putting the rules into practice. During the health drive, class meetings are devoted to a consideration of health directions with reference to food, sleep, fresh air, and cleanliness; assemblies make the good-health idea attractive through health plays; signs and posters advertise health as desirable; and individual weekly reports on observance of health rules are kept by the children themselves. Such a drive centers the attention of the entire school community upon health, leads to a thorough understanding of the simple rules that mean physical well-being, and launches anew the habit of putting these rules into practice. Individuals who are below standard physically are stimulated to care for their health, and are shown how to regain unimpaired vigor.

**Sex instruction.** In the junior high school, for the first time, sex instruction emerges as a general problem. The

connection of matters of sex hygiene with the health program of the school is a logical one, and stress should be laid upon the health aspects of the question with pupils of this age, rather than upon its emotional or moral aspects. This does not mean that children shall be frightened with the dangers of sex irregularity nor with the menace of venereal disease. It means rather that sex shall be normally and naturally related to the other great physical functions, in order that morbid and secret investigations of the subject may become less prevalent. The science class offers the best background for sex knowledge. It is in this class that sex is viewed as one element in the biological story, and that a vocabulary is developed for considering sex matters in a coldly scientific way. A basis is thus laid for mutual understanding when the more intimate and private talks with parents and advisers become necessary.

To supplement biology lessons, two or three talks each term should be given to ninth-year girls and boys in segregated groups. In these talks the function of sex in human life may be simply and adequately treated. This work should be done by the boys' and girls' advisers, in schools having such workers; in other schools it should become the duty of physical directors or the school physician and nurse. Pupils may be allowed to invite mothers and fathers to these meetings, if such a course seems desirable. Care must be taken to treat the subject in a matter-of-fact way, and yet to set at rest the majority of the questions which it is safe to assume are agitating the minds of sixteen-year-old pupils at the mere mention of sex. The talk or series of talks should end with an appeal for right standards and clean thinking,

and the whole matter should then be dropped as a group procedure. Personal questions in private conference with the persons giving sex instruction should be encouraged.

**The work of the teacher in health guidance.** For the most part the health work of the school is necessarily carried out by trained experts — doctors, nurses, dentists, physical training directors, and school advisers. The classroom teacher is concerned, first of all, with rendering complete co-operation to the health plans of the school. This means the occasional upsetting of classroom routine and the giving of lesson time to health matters, but the necessity of such work is unquestionable. In addition to assisting the trained health workers, the teacher must become responsible for many health matters which are of daily occurrence. Cleanliness inspection in the morning, fresh air in classrooms during the day, the mid-morning lunch for malnourished children, setting-up drills to break long seat periods, good posture at all times — these are the particular health duties of the teacher, and only as they are faithfully performed can the teacher feel that the full round of his work has been conscientiously carried out.

### QUESTIONS AND PROBLEMS

1. By what means can a school safeguard the health of its pupils when it cannot avail itself of the services of a physician and nurse?
2. Formulate a set of health rules for junior high school pupils.
3. Suggest devices for interesting pupils in the practice of health rules.
4. Discuss the importance of the teacher's health to the work of the school. What administrative means may be utilized to secure the health of the teacher?
5. Discuss the following statement: "We are beginning to realize that there is a direct relation between hygiene and morality."
6. Discuss the desirability or undesirability of segregating boys and girls in the classes of the junior high school.

## CHAPTER XXIII

### MORAL GUIDANCE

**The moral guidance problem.** Moral guidance aims to lead the child to respond, not to the “accident of authority,” but to inner promptings so clarified, emotionalized, and trained that right conduct is a non-debatable outcome. Even a partial approximation of this aim involves: (a) the direction of instinctive tendencies to action (p. 66); and (b) the compounding of the emotions into sentiments or ideals (pp. 109, 110). Direction of instinctive tendencies is effected chiefly through the establishment of modes or patterns of conduct in response to a controlled environment. The development of ideals is attempted through direct and indirect moral instruction.

**Moral training through the controlled environment.** As a training ground for adolescence, the junior high school must “provide so much of good that the bad cannot creep in.” Through the activities which it encourages, the atmosphere it engenders, and the standards to which it gives its sanction, the school tries to habituate every child to active response on the plane of right conduct. The controlled environment acts selectively upon the instinctive tendencies, calling into frequent expression the desirable ones, and permitting the undesirable ones to lose their potency through disuse. Every time that the school through its control of objective stimuli evokes worthy response in conduct, it accustoms the in-

dividual to that particular type of response, with all its clustered emotions and satisfactions.

Moral direction in the classroom is being exerted unconsciously when every child is whole-heartedly engaged in the work of the day. This is largely accomplished through choice of subjects of intrinsic interest, and through variation in method of attack. If the dullness of routine causes the attention of the children to become diffused, energies that are not being fully utilized are finding other outlets — good, bad, and indifferent. Whenever a lesson flags and children lose the zest of participation, the environment is no longer controlled for good, although there may be no apparent disorder. The doctrine of interest carries moral as well as pedagogical implications.

Departmentalization in itself is an active type of organization. The change to another room, another teacher, and another content of thought and expression means a recentering of interest at the beginning of each period, and a fresh summons to undivided attention and complete response. In addition, the enriched curriculum, with its varied appeals and opportunities, serves to keep children mentally and manually busy. Extra-curricular activities of all kinds — campaigns, assemblies, dramatics, athletics, school orchestras, student newspapers, dancing classes, and club work — offer recreative privileges under controlled conditions, and help to fill the life of the child with attractive things to do. Ordinary temptations have little power to intrude upon the consciousness of children whose thoughts are happily centered in wholesome and engaging pursuits.

**The “temper” of the school.** In a more subtle way,

the very atmosphere of the school should be conducive to the building of fine character. If sunny good humor and hearty coöperation are prevalent, a corresponding spirit will be reflected in each member of the larger whole. The teachers of the school are chiefly responsible for what might be termed the "temper" of the school. No amount of so-called discipline in the form of quietness and obedience can compensate for a genial and courteous atmosphere of consideration and good comradeship. This does not imply that a choice must be made between order under strict authority and license under an easy-going régime. It is rather a choice between the type of order which results from fear and that which results from a willingness to meet the standard unconsciously established when leadership is vested in high-minded and winning personalities.

**Character building by emphasis of traits.** Somewhat more directly the school can give sanction to desirable character traits by including recognition of them on its report card as equally commendable with scholarship achievement. Many schools have included conduct ratings in their monthly reports, but the concept developed in the minds of the children has been largely that of refraining from whispering, note-writing, and similar trivial misdemeanors peculiar to school life. If emphasis is to be laid upon character development, positive rather than negative interpretations of character traits must be built up, and a true sense of values established. The Horace Mann Elementary School has pointed the correct procedure in its chart, analyzing for children, teachers, and parents the attitudes desirable for good citizenship. The following citizen-

ship elements are made clear in terms of daily conduct expression: <sup>1</sup>

Health and posture	Honesty and trustworthiness
Orderliness	Fair play and good sportsman-
Thrift	ship
Promptness	Civic responsibility
Clear thinking	Courtesy and consideration
Helpful initiative and self-	Coöperativeness
reliance	Generosity and broadmindedness
Self-control and obedience	Loyalty
Courage and perseverance	Appreciation

In the Rochester Washington Junior High School, desirable traits are emphasized through the Code of Honor adopted by the school (Figure 10), and through report card recognition (Figures 11 and 12). Pupils who qualify in scholarship, citizenship, health, participation, and character, as set forth in the Code of Honor, receive the school letter.

**Concrete standards for honor recommendation.** To establish a simple and concrete standard with reference to character traits the following analysis is used:

#### STANDARDS FOR DETERMINING HONOR RECOMMENDATIONS

##### *Character*

##### 1. *Coöperation*

A pupil may be said to show coöperation —

- (a) When he helps his class and his school in all their undertakings.
- (b) When he helps to maintain the good name of the school by his conduct in corridors, assemblies, toilets, during relaxation period, at lunch hour, etc.
- (c) When he shows care and respect for all the property of the school — books, furniture, walls, etc.

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<sup>1</sup> Upton, S. M., and Chasell, C. F., "A Scale for Measuring Habits of Good Citizenship"; in *Teachers College Record*, January, 1919.

## CODE OF HONOR

*I. Scholarship:*

A term record of at least "C" (average) in every subject is required.

*II. Civic Habits:**A. Attendance:*

Not more than four half-days excused absence for the term.

*Exceptions:*

1. Church holidays certified by the rabbi or priest to the principal will not be counted against a student's record.
2. A prolonged absence caused by personal illness or serious family trouble will not be counted against the record of a student if he is able to meet the scholarship requirement. In such cases, a special recommendation from the home-room teacher and the approval of the council are required.

*B. Punctuality:*

Not more than four tardinesses per term for unavoidable cause, such tardiness to be excused by the faculty director of attendance.

*C. Thrift:*

Candidates must present at least ten weekly deposit slips per term under the school banking system.

*Exceptions:*

1. A bank-book showing a similar number of deposits in an outside bank will be accepted.
2. Pupils who show excessive waste of materials may lose credit for thrift even though the banking requirement is met.
3. Pupils unable for economic reasons to meet the banking requirement may, upon recommendation of the home-room teacher and the approval of the council, receive credit for thrift in care and use of all school materials.

*D. Service:*

A recommendation from the home-room teacher for service willingly rendered is required.

*III. Character:*

Self-Control  
Reliability  
Coöperation  
Courtesy

} Certified by all teachers with whom the student comes in contact.

*IV. Health:**A. Cleanliness:*

A recommendation from the home-room teacher is required.

*B. Vigor:*

A recommendation from the nurse is required.

*V. School Activities:*

Athletics  
Orchestra  
Assembly Programs  
Pathfinder  
Clubs

} To receive credit a student must have participated actively in one of these and must receive a recommendation from the director.

FIG. 10. CODE USED BY WASHINGTON JUNIOR HIGH SCHOOL, ROCHESTER, NEW YORK

HEALTH

<b>REPORT CARD</b>	
Name.....	
Section.....	
Home-Room Teacher.....	
Term Beginning.....	
 <b>A = Superior Work</b> <b>B = Work above Average</b> <b>C = Average Work</b> <b>D = Work below Average</b> <b>E = Failure</b>  <b>WASHINGTON JUNIOR HIGH SCHOOL,</b> <b>ROCHESTER, NEW YORK</b>	

Cleanliness	1	2	3
No record unless unsatisfactory			
Vigor (physical condition)			
<b>PARTICIPATION</b>			
	1	2	3
Athletics			
Orchestra			
Band			
Assembly			
Pathfinder			
Clubs			
<b>PARENT'S SIGNATURE</b>			
1			
2			
3			
<b>NEXT TERM'S ASSIGNMENT</b>			
Full promotion to			
Partial promotion to			
Subject failures			
Non-Promotion to			

FIG. 11. SHOWING FRONT AND BACK PAGES OF PUPIL REPORT CARD

Name .....

# SCHOLARSHIP

Subjects	1	2	3	Aver.
English				
Literature				
Spelling				
Penmanship				
Latin				
French				
History and Civics				
Geography				
Mathematics				
Science				
Drawing				
Music				
First Lesson in Bus.				
Business Writing				
Typewriting				
Bookkeeping				
Com'l Occupations				
Applied Science				
Assembly				
Mill				
Printing				
Gas Engine				
Sheet Metal				
Pattern Making				
Machine				
Commercial Art				
Electricity				
Drafting				
Household Science				
Design				
Sewing				
Dressmaking				
Millinery				
Foods				
Laundry				
Guidance				
Health Education				

CIVIC HABITS			
Attendance (Days absent)	1	2	3
Punctuality (Times tardy)			
Thrift (Number of Deposits)			
Service	1		
	2		
	3		
CHARACTER			
Conduct as shown in	1	2	3
Self-control			
Reliability			
Coöperation			
Courtesy			

FIG. 12. SHOWING PAGES 2 AND 3 OF PUPIL REPORT CARD

- (d) When he helps to maintain the good appearance of classrooms, corridors, entries, and lawn.

2. *Reliability*

A pupil may be considered reliable —

- (a) When he speaks the truth.
- (b) When he refrains from taking anything that does not belong to him.
- (c) When he keeps his promises without evading or forgetting.
- (d) When his written lessons and tests are strictly his own work.
- (e) When he presents his report card for inspection at home and returns it promptly.
- (f) When school obligations such as excuses for absence or early dismissal, return of library books, payment of book rentals, etc., are honestly and promptly fulfilled.

3. *Self-control*

A pupil may be considered to show self-control —

- (a) When he does not lose his temper at petty annoyances.
- (b) When his conduct throughout the school day is recognized by his teacher and classmates as excellent.
- (c) When his conduct at fire drill is beyond reproach.

4. *Courtesy*

A pupil is courteous —

- (a) Who thinks of the comfort and welfare of others with whom he is associated.
- (b) Who uses "thank you," "excuse me," and other polite expressions at appropriate times.
- (c) Who does not interrupt when others are talking.

**The inculcation of ideals.** An ideal or sentiment is an idea with emotional accompaniments that make it seem a desirable and satisfying pattern of conduct (pp. 118-119). The inculcation of an ideal implies a concept of the nature of the admired act or trait, a strong emotional enthusiasm for it, and a tendency to copy it in conduct. What traits shall be deliberately fostered, what methods shall be used in the

development of ideals, and how action outlets shall be provided are crucial problems for school consideration in the matter of moral guidance.

**Direct moral instruction.** The field of direct moral instruction needs further exploration in the public schools before its values can be adequately discussed. In general such instruction aims to utilize biographical and historical material to set forth vividly and concretely some action-series embodying a moral principle. After story presentation, the class discusses the moral issue involved until the idea stands out clearly, and other examples are then brought forward to enlarge and develop it. Care is taken to select incidents which lead to an appreciation of the sheer moral beauty of right action, rather than those which view rightness as related to reward.

Through direct moral instruction it is expected that the child's concepts of right and wrong will be clarified, and that the affirmations of the discussion will tend to establish an attitude or set of mind toward the particular moral principle of the lesson. The disadvantages of the procedure seem to arise from the fact that the process is coldly intellectual. Ideals which culminate in deeds are shaped in the heat of emotional stress, rather than in the cold thoughtfulness of mental deliberation.

No method of character development should be left untried, however, and the direct moral instruction plan is finding a place and a time allotment in vocational guidance classes, where the essentials of character that mean worthy living must receive emphasis side by side with the study of the ways in which man earns his economic livelihood.

Story discussion lessons on the following character topics are given in connection with the guidance work summarized on page 243.

*Seventh Grade*

Worthy Home Membership

Worthy School Membership

Courtesy

*Eighth Grade*

Service

Reliability

Perseverance

Honesty

Coöperation

*Ninth Grade*

Ambition

Thrift

The Ideal Citizen

(synthesis of desirable qualities)

**Indirect moral instruction.** The indirect approach to the problem of establishing ethical ideals is indirect only so far as the pupils are concerned. It may be directly and consciously planned by the teacher, but results are obtained through the emotional impact of the lesson content rather than through intellectual analysis. This is primarily the method of literature. Literature carries the child in imagination through a re-living process which makes him accept as part of his own experience the deeds and feelings of his hero. If these deeds and feelings are noble and exalted, the child has, for the time being, been raised above the commonplace and trivial to a worthier attitude and outlook. When this happens over and over again, ideals are developed of such emotional strength that the individual must perforce bring his conduct into harmony with his inner life. He even seeks

opportunity to prove to himself by outward action that he is truly the equal and comrade of those great personalities, whose living force has insinuated itself into his mental states.

The teacher who aims thus to affect the texture of a child's thought and feeling need not be concerned with pointing a moral nor discussing ethical situations involved. It is only necessary that the piece of literature be carefully selected, and presented in accordance with its own dignity and worth. If it is appropriate to the range of childish understanding, and if it has the impressive power of true art, it will accomplish its own perfect work. Many a boy has ridden the paths of chivalry with King Arthur, reached the heights of sacrifice with Sidney Carton, and felt with Jean Valjean the all-embracing love of the good Bishop, because teacher or parent has read to him, or induced him to read for himself, those great literary masterpieces which are a spiritual heritage.

**Individual moral guidance.** Large schools are realizing the necessity of a type of personnel service which means the presence on the faculty of the girls' and the boys' adviser. The adviser's duties include the special study of individual discipline problems; the direction and supervision of social gatherings among the students; the coördination of the school with child-welfare agencies in the community; and the group instruction of older pupils with reference to proper dress, good manners, personal standards, and matters of sex hygiene and sex relationship.

Such services are extremely valuable, and should be centered in the hands of one man and one woman rather than scattered as separate responsibilities among a number of

teachers. To the adviser may then be referred those special problems in the moral field which need an intensive study of the individual and a far-reaching follow-up. Through the intimacy of the relationship established, conference with the adviser becomes the chief means of individual moral guidance, and those pupils are reached and influenced who most need moral stimulation, direction, and support. Individual help is also extended to children in difficulties of any kind, and pupils freely unburden themselves to the school advisers, confident of sympathy, advice, and active help.

**Discipline in the junior high school.** Discipline is largely concerned with group psychology — with the subtle reactions of pupil upon pupil under conditions of mass instruction. There are prevalent in almost every group the gang spirit on the one hand, and the desire for personal distinction and supremacy on the other. The essence of good school management consists in transmuting the former into class loyalty, and the latter into proper initiative and leadership in service. The teacher accomplishes these results, first by abandoning the attitude of autocratic authority, and then by so unifying the group through highly interesting shared activities that pressure from the group itself is exerted to bring into harmony with its endeavors any recalcitrant individual who impedes class progress.

**Factors in the establishment of strong morale.** Discipline problems tend to disappear when the morale of a class is high. Class morale is the intangible average of the individual attitudes in a group which determines its degree of trustworthiness. Every teacher recognizes what may be called the character of a class, and knows that his responsi-

bilities are rendered easy or difficult according to the general spirit which emerges in group association. In the last analysis, morale is most strongly affected by inspirational leadership, but additional influences may be brought to bear upon a class to establish a high group standard.

The teacher may, for example, depend to some extent upon the effect of environment. If the atmosphere of the classroom suggests real business on hand — materials ready for instant use, lesson directions already written on the blackboard, neatness and tidiness of general arrangement — the class is likely to accept the suggestion unconsciously and proceed to work at once. Again, if the teacher is thoroughly prepared and accurately informed, as he should be in order to teach at all, the class responds with respect and even admiration. If the teacher's judgment is good in selecting pupil leaders to assist him in the conduct of the lesson, he will be able to capitalize the popularity of the class hero in the interests of class accomplishment. By securing good work and good order without the friction resulting from preliminary scenes of a disturbing nature, the teacher habituates the class to a desirable mode of conduct, and the morale of the group is correspondingly raised.

**Corrective discipline.** Most of the disciplinary occurrences of the school are peculiar to the school situation, and are trivial in character. Usually an analysis of conditions on a given day will show the reason for individual or group infractions of decorum. Minor cases are best handled by the teacher concerned, an effort being made to align the group on the side of right conduct by dealing justly and proportionately with the offense. At the same time condition-

ing causes — temperature of room, difficulty of lesson, wrong seating arrangement, etc. — should be quietly corrected.

Serious cases of discipline, which indicate a spirit not amenable to the school régime and deliberately opposed to school standards, must be dealt with individually. Every school has its typical cases, few in number, but acting as constant storm centers in the smooth current of school affairs. Such cases need the intensive analysis that takes into account factors of temperament, nationality, degree of intelligence, physical condition, and home environment. This is work for the school advisers. Usually some of these factors are found to be operative against the natural adjustment of the child to school control, and the method of approach is consequently indicated.

Offenses cannot be condoned because of extenuating circumstances, but their recurrence may be prevented by suitable remedial measures. Punishment must frequently be meted out. Good sense dictates, however, that it be of a kind which does not leave a lasting scar of humiliation upon the mind of the offender. When the careful methods of the school fail to effect any improvement in an insubordinate individual, his elimination from the group becomes imperative, and some corrective agency should then take over the case. It is a serious mistake to sacrifice the interests of a large number of children by permitting the continued presence in their midst of a delinquent who refuses to respond to school measures, and whose defiant example militates against the establishment of a high standard of conduct.

**Preventive discipline.** The best type of discipline is positive rather than negative. Interesting work, frequent com-

mendation, the setting up of objective goals of attainment, the use of measuring scales to stimulate self-emulation, and deliberate planning for the absorption of otherwise unused energies in worth-while activity, are good classroom methods of rendering the individual impervious to any suggestion of inappropriate conduct. Direct effort in class meetings and through student government operates to establish class and school ideals, and pressure is thus brought to bear upon every member of the student body to live up to the reputation which the school establishes for itself.<sup>1</sup>

### QUESTIONS AND PROBLEMS

1. Does living in the controlled environment of the school tend to build up character resistant to temptation outside of the environment? Explain your answer.
2. What should be the teacher's ideal of good order?
3. Arrange the following school misdemeanors in order of their seriousness. Discuss ways of dealing with each.
  - Cheating on examination.
  - Teasing younger children on the way to school.
  - Whispering.
  - Writing a vulgar note.
  - Chewing gum.
  - Taking money left in the cloakroom.
  - Being tardy when the class is striving for a punctuality record.
4. In what ways does wholesome recreation contribute to moral development?
5. Discuss the bearing upon character of each of the individual factors mentioned on page 263, in connection with the intensive study of individual discipline cases.
6. Read the chapter called "Theories of Morals" in Dewey's *Education and Democracy*, and discuss its bearing upon the whole problem of moral guidance. Explain the meaning of the statement: "The moral and the social quality of conduct are, in the last analysis, identical with each other."

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<sup>1</sup> Rochester Washington Junior High School material is used with the kind permission of the principal, Clinton E. Kellogg.

## CHAPTER XXIV

### PSYCHOLOGY AND GENERAL GUIDANCE FACTORS

THE preceding chapter has brought the reader to the highest point from which he may view the adolescent in his own particular educational institution, namely, at the task of shaping his moral nature. Perhaps it is well to make a brief survey of all that has gone before and, seeing the early adolescent more or less in *totality*, state, in closing, a few items in *finality*.

**Résumé of the psychology of the junior high school pupil.** Following the fundamental thesis that the educational institution — whether kindergarten, elementary school, junior high school, etc. — becomes an agent of a true science of education only in so far as it bases its principles and procedures upon the data of the pure science of psychology (the science of human behavior), and herein seeks in its applications to *predict and control the behavior* of the pupil, the reader has been led to see both the pure and applied sides of the adolescent problem. The successive parts of the treatise have sufficed to present certain outstanding features of adolescent behavior and its educational handling.

**Adolescence and growth.** Through a survey by parts of the growth of the adoleseing body, emphasizing especially the influence of glandular functions herein; a discussion of anatomical and physiological age, wherein a mass of data photographic of the gross physical development of large numbers of adoleseing boys and girls was presented; and

finally, a discussion of mental and pedagogical growth in direct reference to the factors of anatomical and physiological age, it has been shown that the early teen-age is a period of marked advancement along all lines, that the variabilities among either sex or between the sexes are very marked, and that these facts bulk extremely large as the junior high school seeks to adjust itself to the *variability of growth*, both physical (anatomical and physiological) and mental (mental, educational, moral-social, religious), shown as the outstanding characteristic of adolescence.

**The adolescent in reaction.** It has been repeatedly emphasized that the behavior of the adolescent must be interpreted constantly in reference to: (a) the situations and stimuli presenting themselves, and (b) the powers of response resident within the individual. An analysis was made of the unlearned factors of response, as well as the pattern both for modifying these and securing new ways of responding, as suggested by the broad psychology of habit formation (learning). It was made clear that, painting adolescent behavior in broad and significant strokes, nothing radically new enters into the determination of adolescent activity; that the adolescent has at his command "a gigantic stock of reacting mechanisms — reflexive, instinctive, or learned (habitual); that these latter, whether primarily physical or mental, direct or 'escape' mechanisms, understood by the possessor or not," have become shaped during pre-adolescence in natural service to the instincts; and that the early adolescent period finds the explanation for its complexity of behavior, not so much in the introduction of factors hitherto extraneous to his make-up, as in the facts that: (a) the youth becomes nat-

usually placed in a wider set of environing situations requiring adjustment, and (b) he has in his make-up a large stock of reacting mechanisms shaped through pre-adolescence which must enter into behavior.

**Systematic aspects of adolescent mentality.** In a discussion of knowing, emotion, and volition, wherein divisions of mental function were logically justified quite in disregard to the fundamental unity of the actual psychological operations themselves, there was pointed out not only the marked variability and kinds of adolescent mentality, but also the significant fact that early adolescence properly may be thought of as terminating with the maturity of general intelligence; that the emotional and volitional phases of adolescence are in marked upheaval and flux, all pointing to the formation of abiding attachments, adjustments, and ideals tremendously important in guiding present and subsequent action; that the "will" of the adolescent is being trained by every activity in which the youth is a participant, involving as it always has in preceding, and will in subsequent years of his life, nothing but the inheritance of human nature and the modification secured through individual experience.

**Personality in adolescence.** In direct continuance of the preceding, the personality of youth was discussed as his power of total response to the situations confronting him. It was emphasized that personality has been in the making from infancy on and even long before, and that many of the weaknesses of character and personality manifest in the teen-age are the direct survival and accumulations of bad conditions, educational no less than social, preceding puberty; that a significant number show a marked lessening of

capacity for adapting to the environment at adolescence, and, with a more or less prolonged departure from the usual mode of thinking, feeling, and acting, constitute trying mental cases; and finally, that normal social adaptation generally results under frank and honest treatment, the reader being warned to be on his guard against a Freudian tendency to consider all adolescent personality as disturbed in its depths and potentially shipwrecked. The discussion of the moral and religious phenomena of the period, while giving full emphasis to the statistics of criminality, the facts of religious conversion, and adolescent doubt, refused to consider these either as abnormal or not to be understood in terms of the stimulus-response hypothesis basic to all behavior. Neither did we allege that the vast majority of adolescents cannot be led, or is not being led under sane school handling, thoughtfully and rationally to adjust boyish views in the light of new contacts with social and moral problems, science, and the broadened zone of activity generally.

**The psychology of instruction.** After showing that the principles underlying the junior high school may be summed up in the following terms, immediately an outgrowth of, and interpretable by, the psychology of the early youth and his needs, namely, *coördination, differentiation, exploration, participation, integration*, the exacting technique of guiding the expanding mental growth of the period into the acquirement of desirable learnings was presented (supervised study). The broadening, deepening, and utilization of the social urges was explained and exemplified in the socialized procedure of the classroom. Finally, the individual differences looming so prominent in the discussion of Chapters III and VII were found

basic to the discussion given to instructional differences corresponding to ability grouping and failure prevention.

**The psychology of socialization.** In showing the exact application made by the junior high school of the scientific data regarding the social instincts and their rather heterocentric trend during its period, as well as the psychology of participation basic to the development of all deeper emotional, sentimental, and attitudinal states of mind, a full presentation has been made of the way the true adolescent school gets itself organized as a school community; how citizenship training and student government are secured; the pattern of æsthetic, avocational, and social interests developed; and finally, how the basic factors of community living epitomized by the junior high school are integrated and interrelated in such a way that experience is provided for *participating*, both by giving and receiving, in many worthy group enterprises typical of older groups.

**The psychology of guidance.** With applied psychology bringing one finally to the conscious attempt to predict, and hence control, the development of the individual as such, in contradistinction to its group features of control as suggested by student government, socialized recitation, ability grouping, etc., the discussion of the junior high school in educational and vocational guidance was shown to prove a striking commentary both as to its need and its high degree of success in taking the data, technique, and attitude of pure psychology and applying these in counseling. The further relations of guidance to health and physical training were presented, herein answering to degree the questions raised in the discussion of the physiological and anatomical spurts of

the period (see Chapters II and III). Finally, in the moral guidance provided, both directly and indirectly, full application was made of the psychology of emotional development and systematization, as well as application of the dictum so basic to all of Section I, namely, character and personality become shaped for good as the environment is controlled in a way both negative and positive—negative with reference to withholding situations predetermined to call out undesirable reactions, and positive to give the youth opportunity and social endorsement to “carry on” and learn the right through its doing.

**Adolescence and its educational institution in finality.** Forgetting for the time being the seeming coldness of the facts of science upon which the writers have based their treatise, yet basing the faith they hold primarily upon these, let the following be said in conclusion:

(a) Early adolescence follows known laws of growth and behavior, normality rather than catastrophe is its fundamental characteristic, and the junior high school can shape its course to make this normality secure.

(b) While highly effective as a corrective agency, the junior high school can do its legitimate work only as earlier educational organizations—elementary school, kindergarten, home, Sunday School—look forward to its time and lay a proper basis of experience for shaping the instincts, learnings, etc., the individualizing junior high school may properly expect to find among its entrants; finally, the senior high school needs to adjust to the output of its precursor and give its tenth-graders a chance, else inestimable values of character development become lost.

(c) The true teacher of the adolescent, equaled perhaps only by the kindergartner, has unlimited faith in his pupils and proceeds, perhaps at times blindly, yet always hopefully and expectantly, upon the belief that, given opportunity for expression and encouragement, the personality and character of even the most difficult one will develop toward the goal of proper desires.

(d) Finally, the junior high school is education's answer to the call of democracy for democracy. Realizing that all its children are not equally gifted, true democracy demands for each an *equal*, hence not the *same*, opportunity to develop to the very limit set upon one's capacity, to the end that each may find his proper place in life wherein he may be economically independent, socially useful, and contented. This is the fundamental purpose of the institution, shaping its course by the known facts of adolescent psychology.

### QUESTIONS AND PROBLEMS

1. What major possibilities for the application of psychological facts in junior high school can you suggest as worthy additions to those treated in the text?
2. How far should the junior high school share with other agencies in the training of its pupils, for example, neighborhood churches?
3. So far as the evidence from psychology is concerned, how should the elementary school prepare for and articulate with the junior high school?
4. Catalogue developments, both physical and mental, the product of the junior high school may be expected to bring upon entering the senior high school.
5. What problems of adjustment, both in machinery, materials and attitudes, may the senior high school be expected to make?
6. Search for instances where the *pure* facts of adolescent behavior, as discussed in Section I, are overlooked or not logically applied in Section II.

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